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No. 93, Mortimer-street, W. Messrs. W. & E. Hunt, Architects.

Business Premises, Gray's Inn-road. Messrs. Hart & Waterhouse, Architects.

Bruges: La Tour des Halles. From a Drawing by Mr. Malcolm Osborne, R.E.

Presbyterian Church, Umballa. Mr. James Ransome, F.R.I.B.A., Architect.

Church of St. John the Baptist, Kensington. Messrs. James Brooks, Son, & Adkins, Architects.

Premises, King's-road, Chelsea. (*See page* 475.)
Mr. J. Pain-Clark, A.R.I.B.A., Architect.

THE ARRANGEMENT OF OUR MUSEUMS.

A DISCUSSION now in progress in the columns of the *Times* cannot fail to be of interest to all who are in any way concerned with the design and arrangement of a museum. For some time past it has been only too clear that our great collections fail lamentably in exercising the educational influence that they should.

We are not referring to the serious student who knows in what way he is seeking to enlarge his faculties by drawing on the experience of past ages, but to the general public who visit these collections with a vague notion that they will find them amusing and interesting, and make it obvious to the observer, by their listless and aimless air, that their desires in this direction are not being fulfilled.

The system of informal lectures and the somewhat similar one of official guides have been devised to meet this drawback, and are undoubtedly of value. All the same, there is more to be done than this, and it has been widely realised that the objects housed in a museum should, as far as possible, be made to tell their own story.

We must remember that for the purpose of the student, who, as the real worker, has the best right to consideration, it may be desirable to adopt an arrangement quite different from that suited to the general public. The three bases for possible arrangements are the geographical, chronological, and technical, and while these can be combined the whole question resolves itself into which of them is to predominate.

For the student the technical grouping on the basis of craft is unquestionably the one most desirable, while for the untrained public it is quite the least instructive. For them the combination of works of one period and locality, so as to enable them to resuscitate the mode of life in such a place at such a date, conveys much more than the same objects to be viewed separately in a dozen different sections. This aspect of the case has been recognised in Germany as governing the design and arrangement of the museum to a much greater extent than it has with us, and in the German museums it is usual to give a large proportion of the space available to a number of rooms, completely fitted up, made to illustrate in every detail the typical room of a specified district and period.

Nearly all our leading museums have here and there made an attempt to realise something of such a system, but the claims of other methods have limited these efforts.

As a realisation, within one definite period, exceptionally complete in its character and highly provocative of public interest, we may cite the exhibition prepared this year in the Castle of St. Angelo, Rome, in which the rooms were restored as far as possible to the condition in which they existed in the XVIth century.

There can be no question that, if the public only are to be considered, the aim should be to reconstruct all that has survived into a complete picture of the life of the past, using all the components of this picture in their normal relationship to each other, even including wax models for the display of action and costume, such as are to be seen in the groups representing the Indian Tribes in the Museum at Washington.

While the case of Natural History is not exactly on parallel lines, it presents sufficient points of similarity to make the same principles applicable; the chronological element is only present in some branches, the geographical is of definite importance, but we find genus and species replacing the crafts. With these modifications in our initial definitions, much of what has been claimed in regard to the Technical and Ethnological collections applies also to those of the various branches of Natural History.

The conclusion to which we are brought, by examination of the entirely different demands made on a museum by the student and the general public, is that it is surely best to recognise the impossibility of reconciling these demands. If instruction is to be conveyed in a popular form the arrangement employed will not be a convenient one for the student, while if the student alone is to be consulted the public will not be much edified. Now neither claim may be denied, so that we are forced to the conclusion that we should provide what would be in effect two museums.

This view was held by those responsible for the conditions laid down in the recent competition for the National Museum of Wales, though no definite opinion was expressed as to differences of character in the public and students' sections, and the general schedule did not suggest any variation from the type of arrangement usual in this country.

It might be thought that this duplication would materially increase the demand for space, and such an increase would undoubtedly be necessary in the public section if the presentment is to be in the form suggested here. On the other hand, collections for the use of students can take up less room than if they had to be fixed in position and properly seen without the possibility of removal from one place to another.

Again, the general public do not require to see a full and complete collection exhibiting every shade of variation; for them the general impression is the important factor, and a few typical examples of each kind utilised in the groups before referred to are quite adequate. These can even be supplemented with good reproductions, if necessary, more on the lines of the architectural courts at the Crystal Palace, though, of course, not in the rather crude and slap-dash manner there adopted.

The recent enthusiasm for pageantry gives us a hint as to what might be done in popularising the museum; but numerous refinements of arrangement and detail would suggest themselves to anyone making a serious study of this question, and the linking up of the popular and students' departments would give further fruitful sources of interest to the planner. For instance, the students' collections may be arranged over, or under, or around the public collections belonging to the corresponding race and period, while the work of a particular craft, such as the smith, the weaver, or the woodworker (or, in the case of Natural History collections, the genus with its subdivisions), could follow out a line taken horizontally in one direction or another, linking up the various sectional groups.

All these problems are before us, and so far it does not appear as if any really logical attempt has been made to evolve an organic form of museum. Even the possibility or otherwise of such a form is not yet a settled question, and there is ample scope for the architect and the curator of the future to devote their attention to the means we should adopt in obtaining the utmost possible educational value for all classes from our important public collections.

EMPLOYMENT IN THE BUILDING TRADE.

According to the Board of Trade *Labour Gazette*, employment during September was fair on the whole, though not so good as a month ago. It was better than a year ago. Returns received from 1,137 firms employing 58,247 people at the end of September showed that as compared with a month ago there was a decrease in the total number employed by them of 7·2 per cent. in the London district, and of 1·4 per cent. in other districts. Compared with a year ago, there is an increase of 1·8 per cent. in London, and of 0·7 per cent. in other districts. Bricklayers, masons, painters, plasterers, and labourers showed a decline in employment, compared with a month ago, while carpenters, joiners, and plumbers showed an improvement. The improvement compared with a year ago is common to all branches. The percentage of trade union carpenters and joiners unemployed at the end of September was 2·2, as compared with 3·1 a month ago, and 7·2 a year ago. For plumbers, at the same dates, the percentages were 5, 7·8, and 10·1 respectively. For London, the trade union returns show that the percentage of carpenters and joiners unemployed was 3·3, as compared with 3·6 a month ago and 5·7 a year ago; the corresponding figures for plumbers were 7·9, 10·1, and 8.

NEW METHOD OF MEASURING THE VITIATION OF AIR.

HITHERTO the customary method of gauging the vitiation of confined air has been to ascertain the proportion of carbon dioxide contained therein, and to express the relative purity of the air in terms of carbon dioxide, pure air being considered to contain four parts of that gas in 10,000 parts of air. This method lacks precision, because the quantity of carbon dioxide indicates the degree of ventilation rather than the degree of vitiation, and it in no way reveals organic impurities which are deleterious constituents.

Granting that pure air is always oxidant and that emanations from the lungs and through the skin of human beings and animals are all reducent, the measure of the reducing properties of the air should be furnished by numbers directly proportional to the vitiation due to the proportion of foreign substances contained in the air. These being chiefly of organic nature are condensable by means of water vapour.

Based upon these considerations is the new method of measuring the vitiation of air proposed by MM. Henriet and Bouyssy at a recent meeting of the Académie des Sciences.

The method comprises three operations:—(1) To collect by condensation a given volume of water vapour from the air to be examined; (2) to measure the corresponding volume of air; (3) to test the reducing properties of the substances in the water of condensation collected.

For the purpose of condensation the authors employ a cylindro-conical metal receiver, with the capacity of 3 litres, inside which is introduced a similar vessel containing ice and salt. The vapour condensed forms in the outer vessel, and is removed in liquid form, the quantity collected by the authors being always 5 grammes by weight.

The corresponding volume of air is readily computed by the usual rules after the pressure of the mixture of air and vapour and the tension of the vapour have been ascertained by the aid of an hygrometer and thermometer.

In testing the reducing substances collected the following is the procedure:—In a flask of 50 cm^3 capacity introduce 5 cm^3 of the condensed water, then 10 cm^3 of a solution containing per litre 316 *mg* of potassium permanganate and 425 *mg* of chromic acid (pure and free from sulphuric acid). Boil for five minutes and, after cooling, add 10 cm^3 of a solution containing per litre 10 *g* ammonium ferrous sulphate, and 10 cm^3 of pure sulphuric acid at 66 deg., the liquid then taking a greenish tint. Into it drop by means of a burette a weak solution of potassium permanganate (of $\frac{1}{3000}$ the concentration of the normal solution containing 158 *g* per litre) until the appearance of a rose tint. The difference between the reading and the standard reading obtained by repeating the operation without the condensed water gives the quantity of permanganate reduced by the substances occurring in the air under examination. The corresponding weight of oxygen is then deduced, and the results are stated in milligrammes per 100 cubic metres of air.

The following are some results obtained by the authors :—

Source of Air Examined.	*Degree of Vitiation.*
Parc Montsouris	1
Quartier de l'Hôtel de Ville	10
Room occupied by guinea-pigs, rabbits, and monkeys	13
Printing works	13
Office, badly ventilated	14
Dark passage, badly ventilated	17
Dressmaker's workroom	21

In the last example the workroom, measuring 104 cubic metres, was occupied by twenty women, and the windows had been kept closed for twenty-four hours preceding the collection of vapour.

Although the method described cannot be applied so readily as tests for carbon dioxide, it possesses the advantage of indicating directly the influence of injurious constituents in the atmosphere, which can only be guessed at from the results of carbon dioxide tests, and it should be found of considerable value to those engaged in the study of hygiene in workshops and other places where healthfulness is a matter of supreme importance.

NOTES.

Indian Art and Archæology. "EAST is East, and West is West," especially in art and kindred matters. Mr. E. B. Havell, late Principal of the Government School of Art, Calcutta, and the author of several important books on Indian art, is convinced that "the Public Works and Educational Departments as now maintained for propagating European architectural ideas and methods of art teaching have been sapping for the last fifty years the foundations of Indian art and architecture." He suggests, therefore, that India would gain if this Department were reduced, and he agrees, of course, with Lord Curzon, to whose reproaches we referred two weeks ago (p. 410), that the termination of the appointment of Mr. J. H. Marshall, Director-General of Archæology, is greatly to be deplored. The fact is, the importation of European ideals into India has been no more successful in relation to artistic matters there than the similar influence has been on Japanese art. A Western mind is not able to grasp the symbolism of native art, and academic conventions cannot be applied with advantage to the art of the hereditary craftsmen of India. Part of the usefulness of the Archæological Department lies in the help it gives in directing native talent, the outcome of special traditions; and to minimise its power is to defeat the ends of true progress.

The Crystal Palace. WE have considerable sympathy with the object of the representative and influential Conference of public bodies held at the Mansion House on Monday to consider the question of the acquisition of the Crystal Palace and its grounds for the use of the public. The Palace is in itself a structure of considerable interest, which is endeared to countless thousands of people by memories of happy days spent under its glittering roof and within its beautiful precincts; and to know that it was to be pulled down and the site built upon would cause no little regret to many of us. One of the difficulties, after that of raising the money for the purchase, is to know which of several schemes to adopt for its future management and control, and we hope that the Committee which has been appointed to consider the most practical scheme will be able to prepare one which will be generally acceptable. It is interesting to know that Sir Douglas Fox & Partners have made a careful examination of the Palace building, and they find that, as far as the main structure is concerned—its columns, foundations, and everything—it is good for another sixty, eighty, or 100 years, if put into proper condition.

Changes at the Admiralty. THE shuffling of seats in the Cabinet does not usually possess any special interest for the architect, but the appointment of a new First Lord of the Admiralty opens up an interesting question. We understand that when the new processional arch on the Mall was designed it was the original intention that the buildings on either side should form residences for the First Lord and for the First Sea Lord, respectively. As the building neared completion the First Lord is reported to have expressed his intention of continuing to occupy his present house in Whitehall. Someone, who evidently did not realise that First Lords, being political, are here to-day and gone to-morrow, appears to have given orders that the house should be turned into offices. This apparently was done at some considerable expense, presumably not to the advantage of the building. The interesting question now arises: Will the new First Lord desire to live in the new house provided by an appreciative nation for the custodian of its first line of defence, and, if so, what will be done? Will the alterations be again altered? And will this process be gone through at every change of Ministry or general post in the Cabinet if the new incumbent happens to have different ideas from those of his predecessor as to what constitutes a desirable town residence?

The Architect as "Decorator." MR. FARROW'S letter to the *Journal* of the Institute with reference to the lack of any recognition in the Institute examinations of the necessity for adequate knowledge of interior decoration calls attention to a matter of some importance. That architects occasionally lose commissions from ignorance of this subject is no doubt true, but we cannot say that we think it would be to the advantage of architecture if they were all to endeavour to be experts in the Louis XVI., the Adams, the old English, L'Art Nouveau, and the rest of the different styles which make up the stock-in-trade of the "decorator." The decoration of a house should be the outcome, the logical conclusion, of its structure and general character. There are, we think, plenty of architects competent to deal with it in this way, although they could not, and would not if they could, produce such a finished effect in any particular style foreign to their structure as their client might wish and obtain from a firm of decorators. If the Institute took the matter in hand it would, we believe, strengthen the tendency to treat decoration architecturally. This, however, might not help the architect financially so long as clients look upon decoration as "applied ornament," and prefer to have it in a different style in each separate room of the house.

Wimbledon Common Extension. WE feel sure that the appeal issued by the Lord Mayor of London, Dr. Longstaff, and Sir Kenneth Anderson, on behalf of the fund for the extension of Wimbledon Common, will meet with the approval and support of the public. Their appeal makes the point that Wimbledon Common concerns London as a whole; that London benefits by it, but has paid nothing for it; that the Common has been secured and kept up by local residents; and that it is time now that London came to their assistance to help them to secure the land of Kingston Vale before it is too late. We have already dealt with this question in our Monthly Review of Civic Design, in which we pointed out that buildings were rapidly spreading along the new tram route from Wimbledon to Kingston, so enclosing this district in the town area. There is no doubt of the urgency of the question, and that it is one which should receive immediate support. As an old building is often best preserved by finding a use for it, so this district may possibly be most easily secured by making some practical use of it which does not destroy its character. Such a project as a sports centre might enlist the support and the subscriptions of people who are not particularly interested in open spaces, as such, or who think—as the Wandsworth Councillor thought about Streatham Common—that Richmond Park and Wimbledon Common are already large enough.

The Railway Commission. THE findings and recommendations embodied in the Report of the Railway Commission are too voluminous to be discussed here, but it may be remarked that the existing machinery for the settlement of disputes is regarded as inadequate. Various amendments are suggested, procedure modified (in the direction of "speeding up"), and concessions made which should tend to improve an admittedly unsatisfactory state of affairs. In view of the nature of the evidence given at the inquiry, and the tone of the speeches at meetings already held to consider it, it is to be feared that the Report will not be accepted as entirely satisfactory to either side; but if it leads to a better understanding and to more amicable relations between the companies and their employees it will be all to the good. It is noticeable that the remarks in this column at the outset of the strike (as to the futility of industrial bargains in the absence of loyal observance by each side) are fully endorsed by the Commissioners in their Report:—"It is clear that, however satisfactory the machinery may be, however reasonable the settlement, all goes for nothing if a contract once entered into be not loyally observed." We can, with equal readiness, endorse the

Commissioners' conviction that "if railway men will only place the call of duty above and before every other consideration they may confidently rely upon the British public to support them in any fair claim fairly put." The crucial point will be whether or not the new scheme incorporated in the Report will admit of claims being "fairly put" from the point of view of both parties; and it may be regarded as the most hopeful feature of the Report that it has been unanimously agreed to by men thoroughly representative of each side. At the same time, it is already evident that there is a widespread hostility to the Report; and although this attitude may be somewhat modified when its terms are better understood, the outlook is, at present, very disquieting.

The Accumulation of Books.

Lord Rosebery, with a disturbing gift which is his own among our public men, has upset the general and absurd equanimity with which we are apt to regard the accumulation of books both in our national and general libraries. Speaking broadly, we should say that the preservation of books published prior to 1830 (to fix a perfectly arbitrary date) should be maintained, and that those published subsequently should be subjected to a rigorous revision. The respect with which printed matter in book form is usually regarded is altogether out of proportion to its importance. Out of the enormous number of books now published every year the vast majority have no permanent value whatever; indeed, it is scarcely too much to say that a large number of them have no value of any kind. Works of fiction, facile works of travel, biographies, or memoirs published merely for family purposes, might all very well be excluded from collections which aim at any kind of permanence. We do not agree with Mr. Edmund Gosse, whose regard is mainly for belles-lettres, that all possible requirements in the way of a library might be contained "within the drawing-room of a small house in London." Far from it. But we have no hesitation in saying that books of the type which we have indicated are a useless burden to the shelves of any library, whether public or private.

THE NINTH INTERNATIONAL CONGRESS OF ARCHITECTS, ROME.

At the twenty-seventh annual general meeting of the Society of Architects on the 19th inst, the Report of the Society's official delegate at the Congress of Architects in Rome, *i.e.*, Mr. R. G. Lovell, a member of Council of the Society, was presented and adopted. In the course of his Report Mr. Lovell says :—

"I was able to attend the five sessions of the Congress in the Congress Hall and offices adjoining the Castle of S. Angelo. A translation of the subjects discussed and the resolutions carried is appended.

Subject VI.—The desirability of a dictionary of comparative architectural terminology.—This was made clear, and the comprehensive nature of the proposed international dictionary will be realised by referring to the trial sheet herewith. The Congress resolved that the Permanent Committee should undertake this work, and that the text should be supplemented by illustrations.

Subject IV.—Considerations as to modern architecture.—Several papers were read of widely divergent views; but the expressed and unexpressed opinions of the members were so varied and antagonistic that it was found impossible to formulate any resolution.

Subject III.—The technical and artistic education of the architect and the architect's diploma. The exercise of his profession beyond the limits of his own country.—Considerable interest and excitement was created during the discussion following the paper read by M. Albert Louvet (author of the Grand Palais des Beaux-Arts). M. Louvet's views were embodied in five resolutions, the first one being to the effect "that the right to practise architecture should be free in all countries." This appeared to be entirely opposed to all ideas of registration. Neither the paper nor the resolutions had been printed or translated, and the necessity of following the discussion in four languages made it very difficult for the bulk of the members to properly appreciate the importance of this proposal. Your delegate was supported by Mr. W. E. Riley, the delegate of the London County Council, and strenuously opposed any voting being taken that day until members had had an opportunity of properly understanding the resolutions. Although M. Louvet was willing to delete this first resolution, there was a considerable number of members who insisted upon a vote being taken. Fortunately, however, we were able to maintain our objection by a small majority, and the contentious clause was struck out. It will be noted that this resolution did admit of another construction, namely, that an architect should be free to practise his profession beyond the limits of his own country; but the discussion was so involved and the wording so ambiguous that the British and American contingents considered that it was more prudent to adopt the course we did. During the whole of this very important discussion, which referred principally to the education of an architect, I heard no reference whatever made to the necessity of any form of commercial training!

Extra Subject: Copyright.—The resolutions were passed practically without any discussion. They had been carefully formulated by M. Doumet, the honoured President of the Permanent Committee, M. J. M. Poupinel, the Secretary-General, and M. Georges Harmand, Advocate and member of the Permanent Committee. The work already done in England appears to entirely cover these resolutions.

Subject I.—Reinforced concrete.—Several interesting papers were read, including one by Mr. W. E. Riley, F.R.I.B.A., which was very well received, but it was felt that the study and development of this material from an æsthetic standpoint had not made sufficient progress, and it was decided that the Congress should record no vote on the subject.

Several papers were read on :—

Subject II.—The duties of the architect with regard to his employer.—A very heated discussion arose when it was urged that under certain conditions an architect should be permitted to accept payments from the builder. Mr. John Slater, B.A., F.R.I.B.A., made it quite clear to the Congress the strong views existing in our country upon this point. There appeared in other countries to be a certain justification for this custom. For instance, it was shown that in Spain the responsibility for the stability of a building was fixed by law upon the builder, consequently it was usual in big buildings for him to employ an architect to protect his interests, while the property owner employed another architect, who was usually responsible for the design and also for the foundations. The discussion brought to light so many varied views that the Congress only voted upon the main issue, namely :—"That the architect should under no pretext receive fees except from his employer." The further study of this important question was referred to the Permanent Committee.

Subject VII.—Foreign academies in Rome.—Although the American, Spanish, and French delegates shortly described the work which their academies were doing (principally that of research), no announcement was made as to the great work for the establishment of a British Academy in Rome. This scheme Mr. J. W. Simpson has been working at for some time, and, although his efforts appear to be on the point of realisation, he considered it more prudent not to imperil the ultimate success of the enterprise by any premature disclosure.

Subject V.—The carrying out of architectural work for the State or other public bodies.—This proved possibly more contentious than any of the other subjects. The matter had been exhaustively discussed and a decision arrived at at the last International Congress in London. The London resolution was attacked, on the one hand, by those members who desired to have a distinction drawn between the architect and the engineer, and, on the other hand, by those who wished to have a distinction drawn between the official architect and the private architect. The bulk of the British members had considered it wiser to support the resolution of the London Congress, and to ask that no fresh vote should be taken, but, upon it being decided to take a vote, they felt free to follow their individual opinions, and most of them considered that "All public works of a monumental character should be open to public competition, and not be designed by the official architects." A great deal of confusion arose in framing the various resolutions and amendments and in properly translating into the four languages; consequently, in recording the various votes the resulting resolutions are somewhat involved, although they represent what your delegate and the bulk of the British and Americans voted for. The official architects were naturally opposed to the last resolution, and, in the confusion, a protest was lodged with the President, objecting to this resolution, on behalf of the British members. I am quite satisfied, however, that the bulk of them did vote and approve, and do now approve, the resolution as it stands at present, namely :—"That with the object of obtaining monumental buildings embodying all the essentials of art, the schemes in all cases must be prepared by qualified architects, and before the work is put in hand the schemes must be submitted to the approbation of an institution such as the Academy des Beaux-Arts, or to Committees, as the majority of those members are architects."

Earthquake Commission.—The resolution asking the Government of Italy to take the initiative in this matter was passed without any discussion.

Next International Conference.—It had been exhaustively discussed by the Permanent Committee and decided that the next Conference should take place at St. Petersburg in 1914. A cordial welcome was promised by the Count de Suzor, the delegate from the Russian Government, to all those who would go. It is suggested that the Conference should take place in the winter during the period of the high season at St. Petersburg. The general meeting of the Congress unanimously confirmed the decision of the Permanent Committee.

We were given to understand that only about 500 members and Associates had inscribed; no official list was forthcoming before we left Rome. The British numbered about seventy, and we believe they were the most numerous, being closely followed in numbers by the Germans. It is said that many absentees were occasioned by the exaggerated reports of the seriousness of the plague in Italy, and in addition many Roman Catholics declined to attend a Congress held as part of a festival to celebrate the fiftieth anniversary of United Italy and the abolition of the Papal temporal power.

It was evident on all sides that our hosts and *confrères*, the Italian architects, did everything in their power to render our stay agreeable and entertaining. Possibly we Britishers were too exacting in requiring the Congress meetings to be of a more formal character. It was repeatedly stated that the London International Congress and the Town Planning Congress were so excellently organised that it made it almost impossible for any other city to approach them. On the other hand, we found that the generous hospitality of our hosts filled up every moment of our time to overflowing, and certainly there appeared to be more to be learnt outside than inside the Congress Hall. I therefore refer to some of the functions that your delegate was privileged to attend."

In his subsequent remarks Mr. Lovell said :—

"Commendatore Boni, who is the curator, and is in charge of the excavations of the Fori, gave an interesting lecture, with slides, on the "Forum of Trajan—the highest development of Roman art." He described his discovery of the grave of Trajan at the base of the column, and the method he had adopted for determining the exact length of the Roman foot, 100 of which represent the height of the column, including the pedestal. This also represents the depth of earth removed from between the Quirinal and Capitoline Hills. Professor Boni has found that 27·702 metres represent the

exact length of 100 Roman ft., roughly, 91 English ft., instead of about 97 English ft., as previously supposed. Professor Stübben also gave a lecture, with slides, on "Town Planning" similar to the one he gave at the London Town Planning Conference. He described the garden cities of England as the apogee of domestic work, but claimed that in Germany they were making great advances in the planning of towns.

The Ethnographical Exhibition is a most comprehensive collection of typical buildings of each Italian province, correct in every detail, both inside and out. To an architectural student there is gathered together in the Piazza d'Armi samples of all the *motifs* and details that he would have to search the whole of Italy to discover. It is generally admitted that nowhere has better reproductive work been seen."

The following is a translation of the resolutions passed and referred to by Mr. Lovell :—

First Meeting, October 4 : Subject VI.—The desirability of a dictionary of comparative architectural terminology.—The following resolution was carried :—The Congress recognised the desirability of a dictionary of comparative architectural terminology, and resolved that the Permanent International Committee of Architects should organise an international Commission who shall continue the work commenced and present its work at the next International Congress.

The Congress is of opinion that drawings and sketches should accompany the text in order to make the definitions clear.

Subject IV.—Considerations as to modern architecture.—On this subject the Congress was of opinion that no resolution should be voted.

Second Meeting, October 5 : Subject III.—Technical and artistic education of the architect and the architect's diploma. The exercise of his profession beyond the limits of his own country.—The Congress carried these resolutions :—

1. That the right to use the title of architect should be reserved to those who have obtained it as a result of a proper examination passed after an artistic technical and scientific education.

2. That the title of architect should be placed in the same rank as the title Master of Arts, Doctor of Medicine, etc.

3. That the schools of architecture may be varied in different countries, while adhering to the same general rules.

4. That students should not be able to enter schools of architecture until after having obtained in previous schools the same general culture, or a similar culture, to that which is required in the other professions.

Extra Subject.—Copyright.—The Congress draws attention, on the one hand, to the resolutions on copyright made during the last thirty-four years at the International Congresses of Architects and also at the International Congresses of Literature and Art, notably at Madrid in 1904, at London in 1906, and at Vienna in 1908.

The Congress draws attention, on the other hand, to the progress accomplished during the last thirty-four years in European legislation for the protection of architectural works, notably the Spanish law of 1879, the French law of 1902, the German law of 1907, and the convention of Berne, 1886, and by the Conference of Berlin of 1908 ; and the Congress also draws attention to the resolution made at the International Art Congress held in Rome in April, 1911, when uniform protection was declared legitimate for all works of art, including architecture, during the life of the author and at least for fifty years after his death.

The Congress resolved :—

1. That architectural work should be protected in all its artistic aspects.

2. That architectural designs, including the designs of exterior and interior façades, the plans, sections, and elevations, and the decorative details, constitute the first evidence of the thought of the architect and of the architectural work.

3. That the building is only a reproduction, on the ground, of the architectural design.

The Congress confirms the resolution that architectural work and all the designs which compose it, together or separately, also that the construction and all other reproductions, should in all international laws and conventions be protected during the life of the author and during a minimum period of at least fifty years after his death, in the same manner as all artistic works of painters, sculptors, and others.

Third Meeting, October 7 : Subject I.—Reinforced concrete, the mode of using it in different countries, and how it may be applied to great buildings as regards the technical and the decorative point of view.—On this subject the Congress determined to pass no resolution.

Fourth Meeting, October 9 : Subject II.—Duties and rights of the architect with regard to his employer.—First resolution : The Congress decided that the architect should under no pretext receive fees except from his employer—State, town, administration or individual.

(2) The Congress decided to refer the further study on this subject to the Permanent Committee.

Subject VII.—Foreign Academies in Rome : Their history, the studies and works of the pupils, their influence in their respective countries.—No resolution was passed.

Fifth Meeting, October 10 : Subject V.—The carrying-out of architectural works for the State or other public bodies.—The Congress repeated and confirmed the resolution made in London in 1906. The Congress considered that it was necessary to carefully observe in principle a very clear division between the practice of the art of the architect and that of the engineer, and consequently the following resolutions were passed :—

1. That architectural works intended for the State, municipalities, or other public bodies should only be entrusted to qualified architects after competitions or otherwise.

2. That with the object of obtaining monumental buildings embodying all the essentials of art, the schemes, in all cases, must be prepared by qualified architects, and before the work is put in hand the schemes must be submitted to the approbation of an institution such as the Academie des Beaux-Arts, or to Committees the majority of whose members are architects.

Extra Proposition :—The Congress begs the Government of Italy to take the initiative in the formation of an International Commission of representatives of countries subjected to earthquakes in the following manner :—

(*a*) To unite all the studies and the works which have been made and are being made in all that concerns earthquakes, and also the stability of buildings in earthquake countries.

(*b*) To elaborate general regulations and local regulations for constructions to be built in these countries. And to require the representatives of the foreign countries present at the ninth Congress of Architects to ask their respective Governments to create seismatic stations where they do not yet exist.

And to ask that the Earthquake Commissions should be composed not only of learned geologists, but of architects and engineers, in order that these Commissions may, by their work, contribute to the technical and artistic solution of the question of stability of the constructions in earthquake countries.

THE MICROSCOPICAL EXAMINATION OF ARCHITECTURAL MATERIAL.

At the second meeting of the Glasgow Architectural Craftsmen's Society, which was held on October 13, the President, Mr. Jas. S. Boyd, being in the chair, a lecture on "The Microscopical Examination of Architectural Material" was delivered by Mr. John S. Glen Primrose, A.G.T.C., A.Inst.M.M., Lecturer on Metallurgy at the Glasgow Technical College.

The speaker said that, during the past decade, perhaps more than in any other, there had been developed the science of examining and paying minute attention to "little things," and in the doing of this a very widespread interest had been taken in practical microscopy. We are beginning to realise how very true it is that things "are not what they seem," and although it is highly problematical if we shall ever be enabled, by even the highest development of ultra-microscopy, to contemplate "the mighty atom," or to watch the migration of "ions," still we get sufficiently near to the proximate composition and structure of things with the high powers now attainable with the microscope and modern lenses that new and vast fields have been opened up to us in a way which was not deemed possible a very short time ago.

For a long time past microscopy had been regarded rather in the light of an agreeable pastime than as a subject capable of yielding any information of practical value, but the science of microscopy had steadily emerged from the systematic examination of almost all material coming under the practical man's purview, until now we find it regarded as almost the last word to be said in the scientific investigation of "something gone wrong," which cannot be elucidated satisfactorily in any other way. This is true, not only of structural and engineering materials from the metallographic point of view, but also of many other substances too numerous to name. Like most other methods of analysis, however, it is not capable of universal application, but, even recognising the limitations which must still be set, its worth is very great in many directions which are not commonly recognised.

The author explained that he did not wish to be understood as desiring to teach the architect or the builder how to set about their business, or insist that they must go through life with a microscope at their elbow, but hoped to demonstrate how often it would help to solve some of their difficulties, not necessarily by their own use of it, but by their understanding the report of a specialist trained in its use. It is perhaps just a little unfortunate that these experts are inclined to follow the lead of most very technical individuals, and use terms and a phraseology which is very like Greek to the person untrained in their particular branch, and thus much which is of real practical service is either lost or overlooked from want of proper comprehension.

Analysis of Stone.

The branch of microscopy with which he was most familiar, had to do with the structures of metals and their alloys, but, before considering this important section now called metallography, he showed some interesting photo-micrographs made at comparatively low magnifications of different varieties of stone and sands, such as are commonly used in building construction.

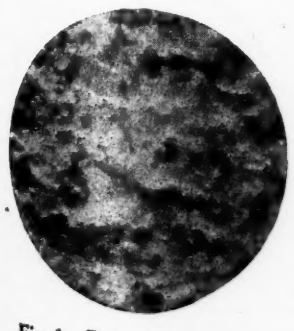

Fig. 1. Polmaise Sandstone. Normal dressed surface.
Magnified 30 diameters.

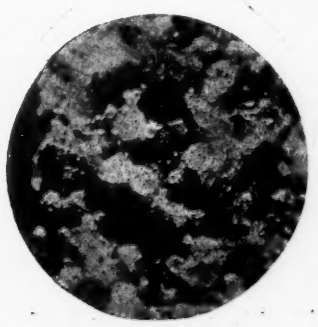

Fig. 2. Polmaise Sandstone. Decayed edge.
Magnified 30 diameters.

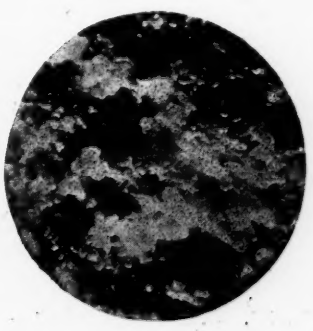

Fig. 3. Polmaise Sandstone. Acid treated.
No. 1. Magnified 30 diameters.

Fig. 4. Portland Stone. Normal dressed surface.
Magnified 30 diameters.

Fig. 5. Portland Stone. Acid treated.
Magnified 30 diameters.

Fig. 6. Closeburn Red Sandstone. Normal surface.
Magnified 30 diameters.

Fig. 7. Closeburn Red Sandstone. Acid treated.
Magnified 30 diameters.

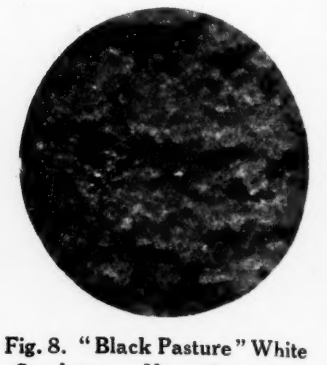

Fig. 8. "Black Pasture" White Sandstone. Normal surface.
Magnified 30 diameters.

The first investigation was undertaken in conjunction with Mr. Samuel Smith, formerly clerk of works to the College, and dealt with experiments connected with the important point as to the durability of various sand and artificial stones when exposed to town atmosphere, particularly a distinctly acid one, such as obtains in Glasgow and most large manufacturing centres. Fig. 1 shows the surface of a dressed portion of Polmaise sandstone, which is of fairly close texture, and shows clearly the sand particles or aggregate held together in their matrix of binding material, which is of a yellowish shade. Fig. 2 illustrates the appearance of the fractured edge of a piece of this stone, taken from the Glasgow Municipal Buildings, and which has been exposed to the air of the city for a comparative short time. It is evident that the matrix containing over 10 per cent. of carbonates has to a very considerable extent been dissolved or eaten away, leaving the sand grains almost unsupported, and in such a condition that rapid wearing away or surface erosion may take place. This effect is said by some authorities to be due to a large extent to the action of bacteria, but, whilst that may be so in certain cases, it would appear much more probable in this instance to attribute the result to the action of acid from the atmosphere. Proof of this may be drawn from Fig. 3, showing a portion of the freshly-dressed stone after being treated with only a few drops of dilute sulphuric acid, when the same pitting effect due to the dissolving away of the matrix is observable.

Fig. 4 gives the surface micrograph of a piece of Portland stone, which has been polished as well as possible to produce a smooth face, in which there are still cavities large enough to show as black patches under the side or oblique illumination used, the small holes being really out of focus of the microscope objective. Keeping the specimen in position on the stage a few drops of acid were dripped on to the stone, when in a few seconds it was found necessary to refocus the instrument, and the very much altered structure shown in Fig. 5 was observed, evincing what might almost be called the absurdity of using such material in Glasgow, where it is not much used. Both the aggregate and binding matrix in this stone are composed of carbonate of lime, which is readily soluble in dilute acid.

Figs. 6 and 7 show the normal and acid treated surface of the same piece of Closeburn red sandstone, such as was used in the building of the Technical College, and it is remarkable how very closely these resemble one another. Not only were several drippings of dilute acid placed on the stone, but finally a little warmed acid was tried, and even then no appreciable difference was noticeable. The only other example worth quoting is that of a similar test applied to a sample of a white sandstone, known as the "Blackpasture," from Northumberland, which has recently been used in the construction of two large buildings in Glasgow, viz., the Wellington-street Post Office and the Mitchell Library. This stone also, like the Closeburn, possesses a very high acid-resisting power, as shown by the comparison of Figs. 8 and 9. These show very slight difference between the normal smoothed surface in Fig. 8, and the same spot acid treated, as seen in Fig. 9.

Although sands which are used for mortar and other purposes are not commonly examined under the microscope, it is frequently a very useful adjunct to other physical or chemical tests. The chemical analysis would actually in this case seem to be for most practical purposes subordinate to the merely mechanical one of grading, since the less uniform the size and shape of the particles the better they seem to bind and set with the admixed material. Figs. 10 to 13 show interesting comparisons of different types of sand in common use. The sea sand, even when perfectly clean, which is not often the case, does not show the needed "sharpness" to give it strong binding powers, as most of the particles are water-worn and more or less rounded at the edges and corners. Silica sand is better in this respect, and is specially free from clayey particles, whilst most of the grains are extremely angular; it is sold as silver sand, but ordinarily it is too expensive. River sand, as shown in the sample taken from the Clyde, does not contain much mud or clay, and the grains are only moderately rounded, but, as a rule, the average fineness got on grading it is low, indicating that it is an extra coarse sand. Loch sand, such as the Belfast red, is usually quite sharp enough, but rather fine, and often too clayey. Crushed sandstone shivers is quite a good substitute if the grinding has not been too thorough, in which case the particles are too small and uniform to be of much use. The figure giving the average degree of fineness is a very useful thing to know, and is easily ascertained by weighing the portions of a definite quantity of sand left after shaking on a set of sieves. On multiplying the weight of the particles passed by the number of meshes per linear inch, and dividing the total by the weight of material taken, the average of the grades is expressed as a percentage. Extremely fine sands show a value from 100 to eighty-five, good medium sands from eighty-five to seventy, coarse sand ranges from seventy to fifty-five, and extra coarse material from thirty to fifty-five.

The following table shows an interesting comparison of the four types of sands mentioned above, and it will be seen that the weight of any particles large enough to remain in the twenty-mesh sieve is added in direct, and the weight of sand lost in sieving is added in to the weight of sand passed through the sixty-mesh sieve. It is of value to note the proportions of the total weight left on each sieve :—

Grade of Sand.	Sea.		Clyde River.		Silver.		Belfast Lough.	
Not through 20 mesh	1·0 =	1	14·2 =	14	0·4 =	1	1·6 =	2
Through 20 mesh	10·5 =	210	40·5 =	810	9·7 =	194	6·5 =	130
Through 40 mesh	35·2 =	1,408	29·0 =	1,160	25·0 =	1,000	3·5 =	140
Through 60 mesh	40·0 =	2,400	8·4 =	504	29·2 =	1,752	4·0 =	240
Through 80 mesh	9·3 =	744	2·1 =	168	9·2 =	736	2·6 =	208
Through 100 mesh	5·0 =	500	4·3 =	430	25·5 =	2,550	81·0 =	8,100
Lost (×60)	1·0 =	60	1·5 =	90	1·0 =	60	0·8 =	48
	100	5,323	100·0	3,186	100·0	6,293	100·0	8,868
Average degree of fineness	= 53		= 32		= 63		= 89	

Now that cements are so largely used in various types of building, the ordinary testing is judged incomplete without a microscopical analysis of the material at various stages of its setting, and some of the most recent books on the subject of testing cement have published photomicrographs for the guidance of those interested in the matter practically. The microscope has been invaluable in bearing out the latest chemical conclusions that the setting and hardening involve changes, the principal products of which are not due to a crystallising reaction, but to colloidal action brought about by the formation of various "sols" and "gels," as

Fig. 9. "Black Pasture" White Stone. Acid treated.
Magnified 20 diameters.

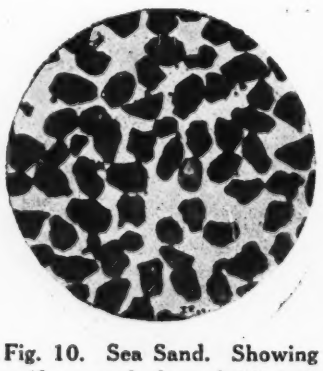

Fig. 10. Sea Sand. Showing uniform grade through 60 mesh with few fine grains.
Magnified 20 diameters.

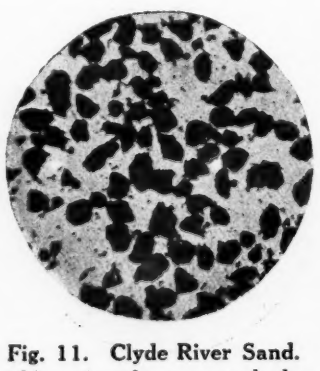

Fig. 11. Clyde River Sand. Showing less rounded particles than sea sand.
Magnified 20 diameters.

Fig. 12. Silica or "Silver" Sand. Showing very angular grains and good proportion of finer particles. Magnified 20 diameters.

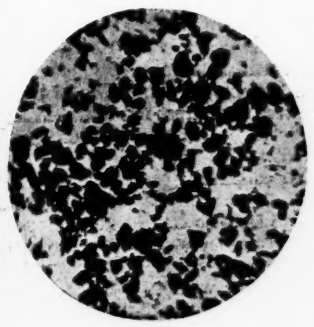

Fig. 13. Belfast Lough Sand. Showing sharp particles, but too many fine particles.

Magnified 20 diameters.

Fig. 14. Pure Iron "Ferrite" in Swedish charcoal iron, showing well oriented crystallites.

Magnified 50 diameters.

Fig. 15. Mild Steel as Cast, showing "Pearlite" (black) and "Ferrite" (white).

Magnified 50 diameters.

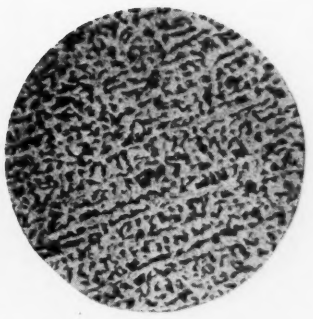

Fig. 16. Mild Steel as Rolled, showing arrangement of the "Ferrite" (white) and "Pearlite" (black) by mechanical treatment.

Magnified 50 diameters.

they are termed, and which can be recognised under the microscope.

From the foregoing evidence it will be clear that, although the microscope cannot replace the chemical analysis of a substance, it is of great service in showing up how the substances present are arranged in the mass, and this is of great service where the structure is in any way patchy or not uniform, which is most often the case.

The Structure of Metals and Alloys.

It is, however, when we come to examine the internal structure of metals and alloys that the microscope gives us most valuable evidence, since not only can it be made to show the arrangement of the constituents as they occur in the solidified condition, but with practice it can also furnish a fairly accurate idea of the life history and heat treatment of the metal, also to a great extent the fitness or unfitness for any specific purpose. Incorrect thermal treatment like wrong or too severe mechanical treatment is quite simple to detect, and even in some cases the structure evinces wrong chemical composition, particularly if some of the compounds formed are such that they segregate badly into patches, which thus cause weakness.

Iron and steel, like most other alloys, are of a comparatively complex structure, since, as the solidification goes on, one constituent (usually a solid solution) separates or freezes out gradually into crystallites, leaving the still molten portion enriched in a second constituent, which solidifies in the interstices around the first in the form of a "eutectic" or solidified mother liquor, which has the lowest melting-point of the series. This "eutectic" is not a chemical compound, although it may have a definite composition, but is itself a mixture of two constituents, which may be chemical compounds, very intimately mixed and usually arranged more or less definitely in alternate layers, which are readily recognised under the microscope. Several lantern slides were shown to illustrate the occurrence and structure of different "eutectics."

The lecturer briefly detailed the methods of selecting and preparing a metal section for microscopical examination, pointing out that it must be free from scratches and then etched for a few seconds in a very dilute (1 per cent.) solution of nitric acid in alcohol. The illumination most frequently employed is vertical, a small reflector being used to direct the light vertically on to the specimen on the stage of the microscope. The chief micrographical constituents were shown to be Ferrite, shown in Fig. 14, which is the ground mass of Swedish charcoal iron, wrought-iron, and most of the very mild steels used in architectural and structural work. Pearlite was shown as the portions containing the combined carbon, and the modes of its occurrence were illustrated to account for the varying strength of the material. Figs. 15 and 16 show it in mild steel as cast, and also as rolled. The carbon in cast-iron is often to a large extent uncombined, having separated out in thin flakes of graphite.

Significance to Architects.

It is not often that an architect is called upon to make an investigation of a serious failure occurring in structural material, but, as he must often be interested in the result, some slight familiarity with the appearance of various types of micro-structures is serviceable in enabling him to follow with a fuller degree of comprehension the specialised reports often submitted along with the results of a complete investigation. Several examples coming under the author's notice were described and illustrated by lantern slides, amongst others being the case of a wrought-iron angle bar which, through failure, was the cause of a fatal accident a few years ago. The fractured edge of the metal showed a portion not far from the bend in which the crystal formation was noticeably different from the rest, even to the naked eye. Under the microscope the cross-section of the metal at this point showed a distinct streak of a highly phosphoric portion. The quality of the metal was not called into question in the inquiry, but apart from the analysis showing too high a percentage of phosphorus, the micro-structure clearly indicated that it was a piece of metal quite unsuited for the purpose to which it had been put. Another instance of the failure of wrought-iron was shown to be due to a considerable proportion of combined carbon having been left in an elongated layer through the metal, thus causing it to be brittle at the point.

Mild steel, such as that used for constructional purposes, is chiefly faulty in respect of either blowholes left from the casting and not completely welded up in the process of rolling, or in having impurities left on account of an insufficient amount of metal having been removed from the top end of the ingot by cropping. These inclusions become considerably elongated in the direction of the rolling, thus weakening the structure very much and giving the metal a tendency to tear or split along such cracks.

A recent case of a roof girder which gave way with serious results was blamed on a defective portion of the metal, but the microscopic examination clearly showed the metal to be sound enough originally, but very badly corroded at the point of failure, due to insufficient care in applying protective coatings. It is not at all frequent to find mild steel in an "overheated" brittle state, but excessive cold working, such as hammering in riveting, occasionally sets up a serious form of brittleness due to the deformation and partial destruction of the crystalline formation. The microscope readily reveals this, and is also able to show how even a slight annealing removes this dangerous state of strain.

Metal which has been subjected to a large number of alternations of stress frequently fails in an alarming manner, and, as the fracture shows large facets, the fault is usually put down to the metal having become crystalline. As a matter of fact, it is really the breaking down of the internal crystalline structure which has caused the destruction of the piece of metal due to fatigue, which is brought about by the development of a large number of "slip-bands" usually starting at the outside and working their way in through the metal by the minute quantity of *débris* formed setting up a grinding action. The cure for this disease in the metal is to allow periods of rest for recovery by renewed growth of the crystals, which effect can be got much more quickly by a short annealing to the correct temperature, but this is only of use if the slip-bands have not got to the stage of forming *débris*, after which nothing short of remelting puts the metal right again.

As phosphorus is very frequently present in foundry irons, its influence must be watched in instances where cast-iron is employed for columns or supports. It may enable the iron to withstand a considerable amount of steady pressure, and yet fail utterly if it receives the slightest rough usage. The size and arrangement of the separated flakes of graphite is very important in this same connexion, and instances have been known where too slowly-cooled cast-iron has failed through the flakes being larger than was compatible with the strength requisite for the position in which it was used.

The heat treatment of cast-iron is not often resorted to, except in the case of white iron, which has to be annealed in order to make it malleable for certain purposes. One remarkable instance of the failure of some brackets was investigated by the author, showing that they had been incompletely annealed, thus leaving a considerable portion of the original structure of white iron which was distinctly brittle.

The examination of failures is not the chief use of a microscopical investigation, since in many instances it is capable of being used as a check against the employing of faulty material. This mode of examination is coming to be largely used, not so much in the way of applying more stringent specifications, as in detecting where causes of failure are due to unfair duty having been put upon the metal, which is unfortunately very often the case, or to the use of material which is unsuited to the purpose for which it is introduced. It is only in quite a small proportion of cases that investigations have shown defects arising from inherent weakness or bad manufacture.

In the discussion which followed it was asked if the lecturer could give a decided opinion on the bacteria theory for the decay of stone, or account for the fact that Portland stone stood well in London, especially in old buildings. He was asked to account for the large amount of sulphuric acid occurring in the air of manufacturing cities.

Mr. Primrose, in reply, stated that, although not a bacteriologist, he deemed it highly improbable that any form of microbe could be found to exist in a stone which was exposed to the atmosphere of cities on account of the acid solution which was formed on the surface and permeated the mass. The strength of the solution might at first be very weak, but as it dried, the acid would become stronger, eventually dissolving out the matrix or binding material if it contained much carbonate. The Portland stone which seemed to stand best in the London buildings was that which had been employed in a seasoned condition, or had been erected long enough ago to get a surface skin before the air became even occasionally acid enough to attack it. It was a well-known fact that the amount of acid in the London atmosphere was much less than that usually found in the Glasgow air. The formation of the sulphuric acid was due to the fact that all coal contains a small quantity of sulphur, and when burned this produces the gas known as sulphur dioxide. On coming in contact with moisture in the atmosphere this dissolves readily, forming the unstable sulphurous acid, which in presence of the oxygen in the atmosphere was soon converted into the strongly corrosive sulphuric acid form. The effect of fluating was to form a surface protective, but those

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Houses, Blyth: Entrances.
Mr. Edward Cratney, Architect.

stones which contained only small proportions of carbonates, and held, in addition, a small amount of natural alkalies, would perhaps be found best able to withstand the action of city atmospheres.

NOTE.—With reference to the accompanying illustrations, the sandstones are photographed under oblique illumination, the sands by transmitted light, and the metal surfaces by vertical illumination.

HOUSES, BLYTH.

IN our issue of January 6 last, p. 26, we illustrated Mr. Edward Cratney's designs for a pair of semidetached villas in brick and rough-cast. On this page are shown views of the houses in their finished state.

LANDSCAPE ARCHITECTURE.

A LECTURE on "Landscape Architecture" was recently delivered by Mr. Thos. H. Mawson, Hon. A.R.I.B.A., before the Gloucestershire Architectural Association.

In the course of his lecture Mr. Mawson said:—

"That we have lost that fine sense of spacious planning which has given to us modern Edinburgh and so many London squares few will deny. Nor will the travelled man or woman deny also that, whilst we are becoming less spacious in our ways and more trivial in our planning, more individualistic and less communistic in our architecture, other countries are learning the restraint which ever characterises the highest art.

It may be well to offer an explanation for this disparity between our own conditions and those which obtain abroad. It is simply this: that in England when a man acquires wealth he seeks the country and the distractions of sport.

Abroad, as a man acquires education he draws nearer the heart of the city, where he finds art, music, literature, and those other refreshments of the mind which are necessary to his intellectual life. The student of landscape architecture finds that the wealthy Englishman and the educated foreigner both demand beautiful surroundings. The Englishman has his country seat, fine gardens, and expansive domain wherein to take his pleasure. Abroad, the man seeks the city and combines with others in providing beautiful parks and gardens for the use of all and free to all.

As usually understood, landscape architecture conjures up to the mind a slight and partial infusion of colour, neatness, and prettiness into the domain of nature or the surroundings of our homes. Whether these scenes are romantic or commonplace, it conveys no more to the mind than dressed-up improvements. Others, again, think of it as a happy field of *laissez-faire* in which there is no constructive beauty. To them landscape architecture is not an art, but something to play with, which may be taken up or dropped at will. How wrong this is we will seek to show.

The successful landscape architect must not only be able to build up in his mind's eye the whole of the buildings, roads, parks, gardens, ornaments, and utilitaria into one harmonious comprehensive scheme of which he is able to prejudge the effect, but must have that intimate practical knowledge which will ensure his giving full effect to his dream.

To do this successfully the landscape architect has not only to study architecture in the round, but he must also have a keen appreciation of natural objects and features, and possess the power to weave the natural and the artificial together without discord. This is generally conceded to the art in its relation to domestic architecture, and very few architects would nowadays undertake the design of a country domain without consulting the man who has schooled himself in these larger problems of landscape and garden composition. To this extent we may say the art is recognised in England. How does it stand in relation to town development? Surely, if anything, this is where the landscape architect is absolutely essential.

In both America and Canada the profession of landscape architecture is gaining, and must continue to gain, in public appreciation. The reason for the greater advance made by the profession in America than here is threefold. First, we have the fact that it is a comparatively new country, which is not only less hidebound by tradition and precedent, but one which, by its rapid growth, provides many more opportunities for the effective application of co-ordinated architecture; and, secondly, the absurd pretentions of persons in England totally unqualified to fulfil its duties, in whose hands many splendid opportunities have been thrown away, thus the minds of those who are capable of estimating the worth of the occasion are filled with a disgust of the whole profession. Lastly, and by no means least, we have here the most unfortunate etymological significance of the term "landscape architecture," which suggests to many persons in this country either unwarranted interference in the realms of nature or a childish attempt to introduce it into our towns by little patches of futile gardening. If it were not that the modern significance of the expression is clearly understood both in America and on the continent, and that its use has become general and more or less unalterable, one would be tempted to advise the adoption of some other term which would, by its construction as well as its application, describe and designate the "architect co-ordinator" whose

Houses, Blyth: South Front.
Mr. Edward Cratney, Architect.

province it is to arrange on an effective plan scattered and detached architectural units.

To avoid a misunderstanding, a line of distinction should be drawn between garden design, whether called "garden architecture" or "landscape gardening," on the one hand, and "landscape architecture" as the term is understood in America. The first relates, for the most part, to the creation of those private gardens of which Englishmen have every reason to be proud; while the latter, though it includes the architecture of gardens, has most to do with works of a public nature, including the planning of cities.

It is characteristic of the attitude of the public generally to the profession in this country and in America that, while here few people nowadays venture to lay out a private garden without professional advice, the municipality still prefers the amateur to the professional in their undertakings. Abroad, so great is the importance attached to the art that schools are not only splendidly equipped, but are increasing in number. So determined are Americans to extract the best that the work can show that they send their professors on long quests to Europe to study classic examples of landscape architecture at first hand, and to collect whatever literature, ancient and modern, can be got together for the use of the students.

Here, however, we are differently placed, for, notwithstanding the excellent curriculum provided by the Liverpool School of Civic Design, which in many respects is unique, it may yet be truly said that we are still without a school where the essentials of the art of landscape architecture as applied to civic betterment may be studied.

This brings us to the question, What are the essentials of the art? And what is the equipment, theoretical and practical, necessary for its practice? First, it may be emphatically stated that the pupil must start with a liberal education so that he may be able to exercise that catholicity of tastes, power of concentration, love of orderly progressions and logical sequence which can only be gained by imbibing the spirit at least of the classics. On this foundation must be built a knowledge in the round, and sympathetic interest in all the various branches of architecture, so that he may be able to meet and sympathise with the specialist in each branch of the profession, whether domestic, ecclesiastical, commercial, municipal, or otherwise.

He is to befit himself to design parks, gardens, and control natural reserves and park systems in a way that accords perfectly with the surroundings—that is, his design is not to be in any sense of the word disjointed, as most of our English civic parks seem to be. To this must be added, or it must be projected upon, a study of sociology, engineering and architecture, botany, horticulture and arboriculture, which makes, broadly speaking, the full subject of town planning, which is in the American mind incorporated in the term, landscape architect.

He must previously have had an expert training in surveying in all its branches, including the modern rapid methods of tacheometrical contouring, and must understand the geologic and other influences which go to make the different local conditions and the formation of the various soils to be encountered.

There are other minor affiliated branches incorporated with these in the Liverpool School of Civic Design, such as the legal aspects of town planning (seeing that we are more bound by precedent than the newer country), but, broadly speaking, apart from these national or local differences, we are at last following the ways of our countries, although we prefer to call the art by another name.

For the practice of landscape architecture, however, much more than this is needed, for, unlike other practitioners, the work of the landscape architect in city development is not so much the design and erection of units as the control and composition of extended areas, and the harmonising of a multiplicity of features, natural and artificial; the first differing in scale and bulk from year to year, and the second constant and abiding. These features must be so manipulated, with a sound practical knowledge of probabilities in the case of the less stable factors, so as to make at all periods in their development a stately or picturesque whole.

Again, while in other branches of architecture a study of linear perspective so far as it relates to the portrayal of individual buildings or groups of buildings is necessary in landscape architecture, the fully-equipped practitioner must be able to make bird's-eye views of the whole city, not, indeed, with the architect's close attention to detail, but in order to show a masterly group of broad areas in mass. Even this does not exhaust the list of the more obvious essentials of this branch of the profession of architecture, for the student must also attain an educated "sense of locality" which will enable him to grasp the practical and æsthetic possibilities of the site, to build up in his mind's eye a picture of the city to be, and, above all, to present his conceptions to others graphically and pictorially in such a manner that they, too, may participate in his vision and become fired with this enthusiasm. This is a standard of attainment which cannot be reached either by way of the American School of Civic Design, even if the student shows a natural aptitude in these departments, for it needs the best teaching of each, supplemented by outdoor studies. This combined course of study and preparation may not be necessary for the architect in general practice, on the one hand, or the landscape gardener on the other; it is, however, necessary for the practice of city planning.

Drawing a comparison between the professional standpoint in England and America on this subject, it may be said, while the English architect too often imagines that what really matters is a knowledge of architecture, such as is demanded under the examination scheme of the Royal Institute of British Architects as a sufficient training for the man who designs both cities and gardens, the professors of landscape architecture in America, with equal sincerity, hold that an expert knowledge of scientific surveying and contouring, botany, arboriculture, traffic problems, and a proficiency in draughtsmanship are sufficient for successful city planning, and therefore neglect the study of architecture. In both cases the outlook is too restricted.

This brief and very incomplete examination of the necessary equipment of the landscape architect will show that there is pressing need for the formation of some association, not necessarily composed entirely of professional men, for the study and promotion of landscape architecture. Assuming for the moment that we are agreed that a special training is necessary and the profession an important one, can we find a sufficient number of men willing to give up at least six years to academic studies, and have we the means of imparting the necessary training? The answer is emphatically, Yes! But the lack of organisation and co-ordination so characteristic of our British methods do not make for the effective collaboration so necessary if we are to frame any project on the lines sketched out, and if we are to utilise what at present exists.

In a country where the practical instruction counts for so much it may be asked, What are the prospects? Of course, all admit that the profession is a delightful one, but what are the material prospects? We do not know; but never was a call of service stronger or the need for missionary zeal more pressing. Our heathens are at our doors. Nay, in this cathedral city of Gloucester, with its rookeries and sordid squalor, you need awakening to civic consciousness, to the value of your glorious possessions, and equally to the range of your opportunities to the need of pleasant boulevards, green spaces, of the restoration of your river banks, so that your citizens may take the leisure uninterrupted by those constant reminders of industrialism from which we all seek to flee.

Civic art is so utilitarian in its purpose to be civic first and art afterwards, and yet to love our city we must make it lovely. This can only be done by awakening in the soul of the citizen that high desire for civic art which has so long lain dormant. This dormant pride can only be aroused by setting before the people a tangible vision of what their city is capable of becoming. The dream of what one's city should be, and may be, and even some day must be, will be a special inspiration to those professions of the fine art upon which the beauty of the city ultimately depends. It is the work of the landscape architect to present this dream in its most alluring form."

Mr. Mawson then showed a number of extremely interesting lantern slides, among which were a fine series illustrating his scheme for the improvement of Bolton, and a charming set of photographs showing the laying-out of large private gardens carried out by the lecturer.

A short discussion followed, and a hearty vote of thanks was accorded Mr. Mawson for his scholarly and fascinating lecture.

NOS. 81 TO 95, KING'S-ROAD, CHELSEA.

THESE shops, of which an illustration appears on our front page this week, have been built for the freeholder, Mr. Charles Pettiward, to replace eight old shops, which were worn out and have been pulled down. The old irregular line of frontage has been straightened up, and a strip of land 5 ft. wide has been thrown into the road to widen it at this point by arrangement with the London County Council.

The buildings comprise seven shops, with living accommodation over for the tenants, and a motor garage, with workshops, lock-ups, and office accommodation over. An attempt has been made to combine the eight shops into an individual block instead of treating them as separate buildings.

The fronts are constructed with brown salt-glazed facings and cream and brown vitreous salt-glazed terra-cotta supplied by the Burmantofts Company. The contractors for the work are Messrs. L. H. & R. Roberts, of Islington, and the architect is Mr. J. Pain-Clark, of Gray's Inn.

ARCHITECTURAL SOCIETIES.

Nottingham Architectural Society.

The opening meeting of the winter session of this Society was held at the Society's Room in St. James's-street on Tuesday.

A letter was read from the Nottingham Building Trade Employers relative to "specialists" in contracts, which was deferred to a future meeting for full discussion.

Messrs. A. Hendy and W. Shepherd were elected members and Messrs. C. F. W. Hasledine, T. H. Waumsley, N. H. Pratt, and J. Warburton were elected Associates of the Society.

After light refreshments had been served, the members adjourned to the lecture-room, where Mr. Harry Gill, M.S.A., a member of the Council, gave an interesting lecture entitled "Holiday Rambles in Norfolk." The lecture was illustrated by a number of his own lantern views of the buildings and churches in Norwich, King's Lynn, Cromer, and the small villages in "Poppy Land." The lecturer pointed out the special architectural features of each view, and gave much useful and interesting information. The President and Vice-President expressed the thanks of those present to Mr. Gill.

ARCHÆOLOGICAL SOCIETIES.

Royal Archæological Institute: Art and History in Westminster Abbey.

An autumn meeting of the Royal Archæological Institute of Great Britain and Ireland was held at Westminster Abbey on the 20 inst., by permission of the Dean of Westminster. The gathering was under the direction of Mr. W. H. St. John Hope, and its purpose was to complete the examination of the mediæval monuments and furniture.

Sir Henry Howorth said that those awful fellows, the architects at the beginning of the Gothic period, thought that everything should be swept away with the exception of what was Gothic, but in the Abbey they had a place where the whole history of sculpture right down to the latest times could be traced, a great museum of English art and history combined, such as was not to be seen anywhere else.

Mr. St. John Hope, by the aid of a plan, described the mediæval arrangement and use of the Abbey Church down to 1540. Many of the mediæval monuments, he said, had been stowed away into corners to make way for tasteless piles of marble sculpture. The Abbey Church was attached more or less to the Palace; no one had any parochial rights in it, and when the Abbot claimed the body of Henry V., who had died at Windsor, it was because the King was their sole parishioner. In the middle of the church was the chapel of the monks, perfectly self-contained, where they sang the services. At the west end was a substantial screen, and beyond that, in the nave, a number of altars. A platform called the Lower Pavement occupied the whole of the crossing in the choir between the four

great piers, on which stood another altar, and at times an enormous seven-branched candlestick of bronze, the result of the Judaising movement of the XIIth century, by which many church ornaments were based on those of the temple. The beautiful mosaic pavement in front of the altar was the work of Abbot Ware, who secured many of the pieces of stone from Italy. The history of the pavement was told in letters of brass, but every one of these had now disappeared. Near by was the Royal pew in which the King sat when he was minded to come from the Palace to hear a service. Mr. Hope also spoke of the extraordinary merit of the early monuments. There was more mosaic work to be seen there than in any other church north of the Alps. The Abbey also contained several examples of heraldic art from 1250 to about 1500, when heraldry fell into decay.

The company then passed into the Abbey. In the nave Mr. St. John Hope explained the heraldry of the carved shields in the spandrels, dating from the XIIIth century, but he regretted that everything was moulder-ing on account of the London atmosphere.

The party then divided into three groups, and under the several guidance of Mr. Hope, Mr. Peers and Mr. Prior visited the various chapels in the Abbey. Mr. Prior described the Chapel of Henry V. as the apotheosis of chivalry, exhibiting the pride of place, of one who lived his life in a pageant that was not at an end on his death. The Chapel of Henry VII. was described by Mr. Hope, who said that he would argue that the beautiful screen was part of the work of a tomb in-tended for Windsor, on which considerable sums were spent. Within the screen was a tomb, which had been broken up and re-placed by the present one. Although the latter was of Italian workmanship, there were certain English features about it.

The afternoon meeting was held in the Jerusalem Chamber, where Professor W. R. Lethaby, Architect Superintendent of the Abbey, read a paper on "The Confessor's Shrine." The shrine consisted, he said, of a gable-roofed coffin, covered with plates, arcades, and figures, all of gold, set with precious stones. Matthew Paris recorded in 1241 that Henry III. caused a shrine of pure gold and precious stones to be set up; prob-ably it was begun at this time, but it was not completed for full thirty years. The King's favourite man of affairs was Odo, the goldsmith, and from the Abbey documents they might conclude that the shrine was the work of Odo and his son Edward, of West-minster. The marble and mosaic basement on which the coffin rested still remained, one of a number of examples of the Roman mosaic worker. An inscription on the presbytery pavement showed that it was laid down in the year 1268 by Odericus from Rome; and a similar inscription on the shrine basement recorded that it was the work of Peter, citizen of Rome, in 1279. He compared the tomb with that of Pope Clement IV. at Viterbo, and said that the best reading of the facts would be that Oderic and his sons were the most famous mosaic workers in Rome, that Henry III., advised by the Pope, attracted the father to Westminster, that the Pope himself died in the year that the pres-bytery pavement was finished by Oderic, and his son Pietro Oderisi made the Papal tomb. Possibly he had been with his father, and was called back to Rome. Later, when the Pope's tomb was done, Peter came to Westminster to execute the Confessor's Shrine. He had compared the shrine base at Westminster with photographs of the Viterbo tomb, and the similarity between them proved, in his opinion, that they were by the same master. They might accept it as proved that the shrine case and Henry III.'s tomb were the work of Peter, son of Oderic, who made the tomb of Clement IV. at Viterbo.

Mr. E. S. Prior delivered a lecture on "The London Style." London throughout the Middle Ages, he said, led the way in matters of art, and at the background of all provincial styles lay the workmanship, and particularly the art, of the capital. The spread of London's style meant the spread of the "shop" style. Mediæval art was peculiarly ecclesiastical, concerned largely with the building of churches and monuments. The bishops were constantly in London, and their monuments and the work ordered by them were sent away to the various cathedrals. London was also the gate for the entrance of Continental influences. It had no building stone of its own, and had to use imported material, unlike the cities of Durham, Lichfield, and Wells. Stone from Reigate and Caen and marble from Purbeck were used, and London was ready to take any materials that it could get. London also brought in masons from the country who re-turned home with the ideas that they had gathered in the capital. He discussed various monuments in the Abbey, and said that they contained many details showing that they were "shopwrought," made of separate materials from different parts of England.

The meeting concluded with a vote of thanks to Mr. Hardinge-Tyler, the Secretary, for his work in arranging the gathering.—*Morning Post.*

Surrey Archæological Society: Visit to Charterhouse.

On Saturday, the 14th inst., a number of the members of the Surrey Archæological Society visited the Charterhouse. The Master, the Rev. G. S. Davies, explained that, owing to the fact that the Monastery was largely rebuilt during the opening years of the XVIth century, it is often very diffi-cult to tell what is part of the monastic build-ings and what Howard House. The gateway and doors are of the XVIth century, but the house above was rebuilt about 1700. The Lay Brothers' Observances were first visited. They were later the servants' quarters of Howard House, and are now known as Wash-house Court, a most interesting red brick Tudor structure.

The Master's Court is mainly post-Dissolu-tion. Three sides have been spoilt by a casing of brick put up by a former Master, but the great hall fortunately escaped. This fine Tudor hall contains a magnificent oak screen, with a fine overhanging gallery along one side, and much beautiful panelling. At first the Guests' Refectory, it was slightly enlarged, the roof raised, and a clearstory inserted to make it the banqueting-hall of Howard House. Later it became the dining-room of Sutton's Hospital.

The great staircase put in by Norfolk was much admired. Up these stairs Ridolphi was led to meet the Duke, and here, later Norfolk was arrested for complicity in the plot.

The Great Chamber was next visited. It is believed that the upper part of the great fireplace was brought from Italy by Norfolk, and the lower part made to match it in England. There is also some fine tapestry of the same date. The chapel was originally built as a church in which relatives of those who had perished in the Plague might pray for the repose of the souls of the dead. In 1371 it became the chapel of the Monastery. The south side of the building is of this date. A new bay with columns was thrown out to the north by Sutton's trustees, and contains his magnificent tomb. Most of the stalls and pews are of the same date. The pulpit is a fine piece of Jacobean work, and the Com-munion table is famous as one of the best of its date, *c.* 1611, still extant.

GENERAL NEWS.

The Society of Architects.

The twenty-seventh annual meeting of the members of the Society of Architects was held on the 19th inst. at the Society's offices at Bedford-square. Mr. G. E. Bond, President, presided. The annual report, part of which was given in our last issue, p. 459, was adopted. Mr. R. G. Lovell read his report as delegate of the Society at the International Congress in Rome, and was accorded a hearty vote of thanks. We print the substance of Mr. Lovell's report on p. 470.

Town Planning at Liverpool School of Architecture.

The syllabus (certificate course) of town planning lectures for the Department of Civic Design at the University of Liverpool School of Architecture has been issued. The follow-ing courses have been arranged:—(A) "Out-lines of Town Planning"; lecturers, Professor Adshead and Mr. Abercrombie. (B) "Civic Engineering and Hygiene"; lecturers in engineering, Professor Brodie and Mr. Aman; lecturer in hygiene, Professor Hope. (C) "Civic Law"; lecturer, Mr. Chaloner Dowdall. (D) "Civic Architecture"; lecturer, Professor Adshead. (E) "Civic Decoration"; lecturer, Professor Adshead. (F) "Parks and Gardens"; lecturer, Mr. Thomas H. Mawson.

Repairs at the Houses of Parliament.

During the recess the frescoes in the corri-dors leading to the lobbies of the House of Lords and House of Commons have been restored under the direction of Professor Sir Arthur Church. The six historical pictures behind the Strangers' Gallery and at the back of the Throne in the House of Lords have been cleaned. The work carried out by the Office of Works since August includes a thorough cleansing of the House of Commons. The brasswork and carving has also been repaired. In Westminster Hall, at the south end, the three principals of the roof have been renovated, parts of the wood which had decayed having been removed and fresh pieces of oak bolted in.

Royal Academy of Arts.

The winter exhibition at Burlington House will be devoted to works of Old Masters and deceased British artists, with paintings by the late Josef Israels, Corresponding Member, R.A., and of the late E. A. Abbey, R.A. On November 8 election will be made of an Associate to the vacancy occasioned by the death of Mr. Abbey. Unless the King's signature can be appended to the diplomas before his Majesty sails for India no Associates can be officially elected during the autumn to fill the places of Mr. F. Bramley and Mr. A. Parsons, recently elected full Academicians.

Tattershall Castle, Lincs.

The Governors of the Manchester Whit-worth Institute have lent for exhibition by the Walpole Society in the Grafton Galleries a large water-colour view of the Castle painted by Thomas Girtin, and first shown by him in the Royal Academy Rooms in 1799.

Preservation of Stone Masonry and Frescoes.

Sir Arthur Church has just retired after more than thirty years' service from the Chair of Chemistry, Royal Academy. He has signalised his term of office by manifold re-search, and the steps he took for resisting the evil effects of sulphuric acid upon many of our public buildings and paintings. He applied the Baryta process to the walls of Westminster Abbey, Chapter House, and Palace, the Bodleian Library, the Chapel at Holyrood, and Greenwich Hospital, where he restored a decorative painting by Genti-leschi, besides the wall paintings in West-minster Palace. The process is applicable to statuary of bronze and marble placed in exposed situations.

"Nab Wood," Windermere, Westmorland.

The freehold estate known as "Nab Wood," formerly occupied by the owner, the late Geo. A. Pritt, and comprising a modern residence with extensive gardens and grounds on the eastern shore of lake Windermere, has been sold by private treaty by Messrs. Trubshaw & Gibson to Major G. Armitage. Alterations and additions to the house and grounds are now in progress, and are being carried out to the designs of Messrs. Trubshaw & Gibson, who have designed an extensive terrace and garden scheme.

Incandescent Glow Lamps.

The first of the special series of twelve lectures on "Illumination" arranged to take place at Battersea Polytechnic was delivered by Professor J. T. Morris on October 17. On this occasion the lecture dealt with incandescent glow lamps, laying stress on the enormous progress of the last few years, and the extraordinary difficulties that had been successfully overcome in making metallic filament lamps. The gradual evolution of the carbon filament, Nernst, Tungsten, and Tantalum lamps, the methods of attaching the filaments, and making allow-ance for the "sag," were illustrated by a series of lantern slides. The actual filaments used in various types of carbon and metallic filament lamps were mounted intact on one of these slides, and thrown upon the screen in order to show their comparative thinness, and the lecturer subsequently showed that even these fine wires could

support a tension of a 2-lb. weight without snapping. A great variety of the latest types of lamps was also shown, including the latest 200 v. 15-c.p. Osram lamp, and the new drawn-wire Mazda lamps. A series of life curves on metallic filament lamps (the latest tests of the National Physical Laboratory) also attracted much attention.

Subways in the City.

At a meeting of the City Corporation on the 19th inst. the Streets Committee asked for Parliamentary powers to construct a subway for pedestrians across Cannon-street, near the Mansion House Station, at an estimated cost of 16,000*l*. Mr. A. C. Morton, M.P., said it was true that the Mansion House subways were only used by from 12 to 14 per cent. of persons wishing to cross, but even that percentage represented more than 20,000 persons daily, besides those who used the stations. The report was carried. On the recommendation of the Streets Committee the Court sanctioned a subway between the Moorgate-street Station of the Metropolitan Railway and the adjacent station in Finsbury-pavement of the Great Northern and City Railway. The Court gave its consent to the introduction of a Bill in Parliament by the London County Council authorising the construction of a tramway in Bishopsgate from the City boundary to Middlesex-street.

C. S. Rolls Memorial.

The statue erected to the memory of the late Hon. Charles Stewart Rolls, M.A., F.R.G.S., A.M.I.Mech.E., in Agincourt-square, Monmouth, facing the Shire Hall, and unveiled on October 19, was sculptured by Sir W. Goscombe John, R.A. The monument, of bronze, 16 ft. high, represents Mr. Rolls habited as in his flight across the Channel, and holding in his hands a model of an aeroplane: on the pedestal are bronze panels symbolical of aviation, ballooning, and motoring.

Maclagan Memorial Window, Newington Butts.

The Bishop of London will dedicate on October 31 the memorial window to the late Archbishop Maclagan in St. Gabriel's Church, Newington Butts, the church of which the late Archbishop was the founder. At the conclusion of his ministrations at St. Gabriel's, his plan for filling the east window was completed only so far as the centre light was concerned; in this was depicted, in ascending order, "The Annunciation," "The Crucifixion," and "The Ascension"; exactly what he had designed to fill the two sidelights has now been completed. Dr. Maclagan's conception of St. Gabriel took cognisance of the Saint's appearance to Daniel and to Zacharias, and these appearances furnish the themes for the lower panel pictures, in the left and right hand lights respectively. The upper panels being devoted to the "Agony" and the "Women at the Tomb," occasion has also been taken to fill the two quatrefoils, with angels, which are superimposed, above the two sidelights, and nearly level with the top panel of the centre light, in which is depicted "The Ascension." Messrs. Morris & Sons, Ltd., of 239, Kennington-road, have executed the work.

Art Publications.

The *Connoisseur* announced for publication on the 23rd inst. the life and works of Sir Henry Raeburn, R.A., by Mr. James Greig. The volume contains more than fifty illustrations and a catalogue of Raeburn's works. The Christmas Number of the *Art Journal* is devoted to the art of Mr. Stanhope A. Forbes, R.A., whose son, by the way, has just entered the schools of the Architectural Association.

Royal Military College, Sandhurst.

The new buildings on the eastern terrace are nearly completed. Six companies of cadets will be accommodated in the two wings of the buildings, which cover an area of almost 1,000 ft. by 200 ft. in extent. The general design is Classic in manner; the central block has a Doric portico, with an Ionic columnar Order above, and a copper-covered octagonal dome. Covered corridors join the wings to the main block, faced with Ancaster stone to the first-floor level, and of red brick with stone dressings on the upper two floors; in lieu of the old cubicles the cadets' rooms, thirty-five on each floor, are 11 ft. 6 in. by 9 ft. 9 in., and from 10 ft. to 11 ft. high. The dinner-hall is 156 ft. long, 48 ft. wide, and 24 ft. high to the apex of the domed ceiling. In a vault are four 20-ft. boilers, whose shafts draw all smoke from the furnaces, which heat water for the radiators in the halls and corridors, the pipes in the cadets' and officers' quarters, and the bathing and domestic service systems. The buildings have been erected, at a cost of nearly 250,000*l*., by Mr. T. Rowbotham, of Birmingham, to the designs in every detail of Mr. H. B. Measures, M.V.O., F.R.I.B.A., Director of Barrack Construction, War Office; Mr. E. Peers was chief clerk of the works. The whole interior of the older buildings, erected in 1811-2, is to be reconstructed forthwith.

Faculty Pews.

The holding of faculty pews in our churches is somewhat anomalous in these modern times, but in some churches their removal is to be deprecated, as destroying the character of the church and the stamp of its antiquity; the old oak pews, too, often being removed to give place to less cumbrous modern seating. It is not often, however, that the rights of faculty pewholders are shown to constitute an obstacle to securing the safety of the rest of the congregation. The Vicar and Churchwardens of the celebrated Priory Church at Christchurch have recently applied for a faculty for the removal of the galleries from the north and south transepts and for other improvements, but this was opposed by the holders of certain faculty pews. The Diocesan Architect had made a report that the north gallery, with its narrow staircase, was a veritable deathtrap in case of fire, and the Chancellor, in his judgment, said that unless the owners of the faculty pew in that gallery undertook to repair the gallery and to remove this danger a faculty would be issued for the removal of the gallery, a faculty pew being provided for the holders in some other agreed position in the church. This seems a reasonable condition to impose, and in this case the galleries would appear to offer no advantages, as the report made by Mr. T. G. Jackson, R.A., Diocesan Architect, sets forth that the galleries of early XIXth century period are ugly and obstructive, and in the case of the north gallery dangerous by reason of its narrow staircase, and that their removal would greatly contribute to restoring its ancient beauty to the interior of the church. The learned Chancellor granted a faculty for the other objects of the petition, comprising the transfer of the organ-blowing chamber from the south gallery to the transept below, the provision of a second communion table outside the choir-screen, and reseating in the transepts and nave. The costs of the hearing and opposition must, he said, devolve upon the applicants.

BOOKS.

The Cathedrals of Central Italy. By T. FRANCIS BUMPUS. With fifty-one illustrations. (London: T. Werner Laurie, Clifford's Inn, Fleet-street. 16s. net.)

MR. FRANCIS BUMPUS is a voluminous writer, with an evident love for architecture and a keen appreciation of the masterpieces of the art. He writes enthusiastically of work he admires, and though his gossipy narrative is sometimes a little too discursive, it must be admitted that his volume is both readable and instructive. It is intended, we presume, principally for the educated layman interested in the works of architecture, but it contains much that will appeal to the architect. Mr. Bumpus has the right perception of the value of architecture to a nation when he says: "Architecture and the arts subsidiary to it not only throw a lustre on the reign of kings, but in the monuments they erect sum up most completely the cultivation and tendencies of the nation, keep its memory green, and where its glory has departed and all else has been swept away, still point to the greatness and intelligence of the people." There is nothing new in the observation, but the point is worth making whenever opportunity occurs, especially in such a work as this. The first chapter is devoted to "The Journey," the author having a great deal to say in these seventy-eight pages—not always about architecture—that is interesting, giving the result of careful observation and investigation; and this interest and impression are sustained by a perusal of the subsequent chapters. There are two chapters on the arts subsidiary to architecture:—I. "Stained Glass Painting"; II. "Sculpture"; followed by a chapter on "The Romanesque" and three chapters on "The Gothic." The work includes an index and over fifty illustrations, two or three of which are coloured plates from paintings by Stafford Leake. This is one of the best works which, in our opinion, the author has written, and we are glad to call attention to it.

Practical Mathematics and Geometry. By EDWARD L. BATES and FREDERICK CHARLESWORTH. Part III. Advanced Course. (London: B. T. Batsford. 1911. Pp. 776. 3s. net.)

THIS book, with Parts I. and II., forms a progressive course of instruction so arranged that students can acquire by easy stages the knowledge necessary for passing the technical examinations of the Board of Education and for assisting them afterwards in practical work. The present volume has been written to cover the extended course resulting from the recent decision of the Board of Education to discontinue Stage I. Examinations in practical mathematics and geometry. The book is very clearly written, well illustrated with diagrams, and excellently produced. It will be found a valuable guide for advanced students.

Mill and Factory Wiring. By R. G. DEVEY, A.M.Inst.E.E. (London: Constable & Co., Ltd. 1911. Pp. 197. 2s. net.)

A VERY handy little book, written from the practical standpoint and free from all complicated technical matter. The installation of wires and cables by various methods is dealt with clearly, and the numerous diagrams of connexions for all types of electrical machines in general use should enable the wireman to wire and connect to any generator or motor with the necessary auxiliaries.

Practical Advice on Gasfitting. By R. HALKETT. (London: Walter King, Office of the *Journal of Gaslighting*, 11, Bolt-court, E.C. Price 2s. 6d.)

THIS little work is by a man who understands his subject, for Mr. Halkett is Assistant Superintendent of the City of Leeds Gas Mains and Distribution Department. It is a practical little book, the information in which is clearly stated, and the facts, as the author claims, can readily be grasped. The work contains several diagrams, etc., in order to make the author's meaning clear.

Electrical Mining Installations. By P. W. FRENDEMACHER, A.M.Inst.E.E. (London: Constable & Co., Ltd., Orange-street, Leicester-square, W.C. 2s. net.)

THIS volume is intended specially for colliery engineers and contractors engaged in the installation of electrical plant for mining purposes. The book includes chapters on generating plant, generating-station switch gear, electric haulage, electric pumping, and electric ventilating. The work contains several explanatory diagrams.

Guide to Patents, Trade Marks, and Designs. (London: J. S. Withers & Spooner, Chartered Patent Agents, 323, High Holborn.)

THIS is the fifth edition of a useful little guide the object of which is to explain to inventors the elementary steps necessary in connexion with the protection of inventions and the registration of trade marks and designs. It is not exhaustive, but deals with points on which inventors often require information.

BOOKS RECEIVED.

ALL SAINTS' CHURCH, HORSEHEATH. By Catherine E. Parsons. (London: Cambridge University Press. 5s. net.)

PYROMETRY. By Chas. R. Darling. (London: E. & F. N. Spon, Ltd.)

REINFORCED CONCRETE CONSTRUCTION. By M. T. Cantell, Lic.R.I.B.A. (London: E. & F. N. Spon, Ltd. 4s. 6d. net.)

CHURCH STUDY. By M. M. Penrose. (London: The National Society. 4s. net.)

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. E. White (Chairman) presiding.

LOANS.—A loan of 15,000*l.* is to be made to the Hampstead Borough Council for the purpose of street lighting by electricity in place of incandescent gas lighting now in use.

The Kensington Royal Borough Council is to receive a loan of 550*l.* for acquisition of certain property, and a loan to the Guardians of Holborn Union of 4,700*l.* for Poor Law purposes.

SCHOOL, STEPNEY.—It was reported by the Education Committee that the Senrab-street School, Stepney, is to be enlarged to provide accommodation for 1,162 children, and that plans had been approved for that purpose.

SCHOOLS.—The York-road School, Islington, is to be enlarged at a cost of about 1,190*l.* Heating apparatus and electric lighting are to be installed at the Great College-street School, St. Pancras. Various alterations are to be carried out at George Green's School, Poplar.

NEW SCHOOL.—The same Committee also reported that revised plans have been approved for the erection of a new Rural Council School at Dockhead, Bermondsey.

RECONSTRUCTION OF OFFICES.—The girls' offices of the St. Barnabas School, Hanover-square, are to be reconstructed, and the Committee have approved plans for that purpose.

CLOAKROOM.—A new cloakroom is to be erected at the St. Joseph's Roman Catholic School, plans having already been passed for the work.

CHIEF FIRE-STATION.—In a report by the Fire Brigade Committee it was stated that the extension of the chief fire-station has now been completed. The testing ground at this station is being lighted by electricity at a cost of about 55*l.* Electric lighting is also to be installed at the east and north-east blocks of this station at a cost of about 235*l.*

WHITEFRIARS FIRE-STATION.—Alterations are to be carried out at this station at a cost of 1,555*l.*

DRILL TOWER.—A drill tower is to be erected at the Bethnal Green Fire Station at a cost of about 100*l.*

OLD OAK ESTATE.—In a report of the Housing of the Working Classes Committee it was stated that good progress had been made with the erection of houses on this estate, and that it was proposed to erect eighteen more cottages and three shops on the estate.

LIBRARY, EDUCATION OFFICES.—The Establishment Committee reported that it was necessary to provide additional accommodation for the books in the library at the Education Offices, and that the estimated cost was 113*l.* 10s.

ST. PAUL'S BRIDGE.—In a joint report of the Highways Committee and Improvements Committee it was recommended that Parliamentary powers should be sought for the construction of tramways from Southwark-street over the proposed new bridge. It was stated by the Finance Committee that this proposal would require the expenditure of 350,000*l.* towards the cost of widening St. Paul's Churchyard and the construction of tramways and subways.

An amendment was put forward by Mr. J. D. Gilbert asking that a scheme should be submitted for the provision, on the basis of the Home Office suggestion, of a new road in continuation of the proposed southern approach to the bridge.

This amendment was opposed by Lord Alex. Thynne, who contended that it was not wise to construct such a new road until they knew the character and volume of the traffic which would pass over the bridge.

It was also pointed out by Mr. Hayes Fisher that it would probably be six or seven years before the bridge was finished, and experience showed that it was not always an economical policy to buy land in advance of the time when it would be wanted.

Further consideration of the matter was then adjourned.

ADMIRALTY ARCH IMPROVEMENT.—It was reported by the Improvements Committee that terms had been arranged for the acquisition of all interests in the property needed for the Mall and Charing Cross improvement.

CORRESPONDENCE.

The R.I.B.A. and the Society of Architects.

SIR,—In the Report of the twenty-seventh annual meeting of the Society of Architects, published in your last issue, I find the following:—

"The meeting was consequently adjourned, and in due course your Council received an intimation from the Council of the Royal Institute that they proposed to make an application to the Privy Council for a supplemental Charter, which would give the necessary powers to enter into the agreement."

This I believe to be the first information that any ordinary member of the R.I.B.A. has received that such an intimation had been given by the Council of the Royal Institute to the Council of the Society of Architects, and I am astonished that such an arrangement should have been made without consulting the general body, and that it should have been left to the Society of Architects to declare the manner by which they hope to be absorbed. W. H. BURT, A.R.I.B.A.

[*** The report quoted by our correspondent does not exactly convey the state of affairs. We understand that the R.I.B.A. agreed to take steps towards securing a Charter, and the first of these steps would be to obtain the authority of the general body, which has not yet been done.—ED.]

The Breaking-up of Landed Estates.

SIR,—The breaking-up of so many landed estates throughout the country will remove an influence which for centuries has been identified with our great landowners in the preservation of natural scenery. This may be seen on all sides in town and country; in London it gave us the 400 garden squares of which we may well be proud, and in the country that influence has preserved the landscape in innumerable places.

As this influence wanes, can we look for another conserving force without the intervention of a public authority? This question appears to me to be answered in the affirmative by a landowner who, in submitting to auction lands in Eynsford and Farningham, bars the erection of objectionable buildings by a condition of sale that each building shall be subject to the approval of the Royal Institute of British Architects. All purchasers being under like restrictions, all are alike benefited, and the community gains.

Those who know the valley of the Darenth, with Lullingstone Park, the seat of Sir William Hart-Dyke, and the Elizabethan mansion of Frank's Hall, recently purchased and restored by Earl Bathurst (whose ancestors occupied it in Tudor times), will appreciate this effort to preserve the old-world setting of a valley which owes so much to the celebration of Arbor Day by the annual planting of shade trees in the thoroughfares and fruit-trees in the cottage gardens of Eynsford and Farningham.

This proposal to substitute the influence of the Institute of British Architects for that of the great landowner will, I trust, be cordially supported. MARK H. JUDGE.

White-Lead.

SIR,—You have a "Note" in your issue of the 20 inst. condemning the use of white-lead as a pigment on the ground of its being necessarily injurious to the health of the painter. During forty-five years I employed many thousands of painters, and can say that in point of health and healthy appearance they compared quite favourably with any other class of operative. Some of these men I have known for thirty, forty, and fifty years. During this time there have been a few cases of what is called "painter's colic," which have mostly responded to treatment in a few days; I can remember but one case causing death, and in this case the victim was a zealous, good workman, but personally untidy and careless of himself.

Undoubtedly there are some constitutions "predisposed" to being affected by lead, and these persons should never become painters.

There are certain conditions of work, well understood and for the last sixty years acted on by all good painters and employers, indispensable to the safe use of white-lead; these are personal cleanliness and the invariable washing of hands before meals and before leaving work. It becomes a fixed habit with the men, and facilities for it are a recognised part of the employer's provision of materials and plant on a painting job, as it is one of the foreman's duties to see that the practice is observed. If it be true that there is lately an increase in the number of cases of lead-poisoning reported, I think this may be explained in two ways:—Firstly, that for cheap contract work many casual hands are taken on who are not trained painters; secondly, that since compensation claims for lead-poisoning can be made on the employer, even after a few days' engagement, "lead symptons" have become more frequent. Great efforts are made by those interested in "white zinc" manufacture to make the most of the faults of "white-lead," but the latter has qualities for which, in our climate, zinc is no substitute.

It is many years since I have employed any painter, nor have I the remotest interest in lead manufacture, but my own long experience does not confirm this determined outcry against a valuable material.

J. D. CRACE.

Architects and Shop Designs.

SIR,—Your correspondent, Mr. Vale, who writes in your issue of September 1, finds shopkeeper clients more difficult to deal with than they are here. The large drapers, etc., who have had considerable experience of London shops say that they gain by setting back the showcase, and form an arcade along the front, as the area of glass can be greater by designing the divisions with recessed bays, and this, they consider, compensates them for the loss of area. Their customers are also able to shop in comfort in all weathers, as they are protected from rain and sun. We experience no trouble from shadows.

Singapore. ARCHITECT.

INTERCOMMUNICATION COLUMN.

Church of St. John the Evangelist, Horselydown.

SIR,—Will you oblige by informing me if St. John's Church, Southwick, county of Surrey, is in existence now? I am anxious to know if a monument erected to Benjamin Kidney now exists. It was erected in accordance with his will in the year 1787 or 1788 in the old church. I find that the monument erected to John Gower, who died in 1402, has been removed from the Chantry of St. John, where he had been buried in accordance with his will, and was re-erected in St. Mary's Overies, now St. Saviour's, Southwark.

I find on one map of London St. Olave's Union and a church at the back of the Union, from High-street, Borough, down St. Thomas-street, Crufix-street, to Artillery-street; this last street should be in front of this old church marked on my map. On examining the list of churches I fail to find a St. John, Southwark. You have given us many particulars on churches; can you kindly oblige me? W. IBBS BROWN.

[*** Our correspondent's letter relates clearly to the existing Church of St. John the Evangelist, Horselydown, in Bermondsey, built in 1731-2 as one of the "Fifty New Churches." There is no connexion, so far as we know, between that church and the St. John's Chapel, or Chantry, that stood formerly in the north aisle of St. Mary Overies (St. Saviour's), wherein John Gower founded a chantry and was buried, 1408. His monument was removed from St. John's Chapel into the south transept, and repaired and recoloured *ex impensis* the Duke of Sutherland, in 1832; it was returned to its original position fifteen years ago, in the north aisle of the nave, as restored, of Southwark Cathedral. A reply concerning the Kidney monument could doubtlessly be obtained from the Curate-in-Charge, St. John's Rectory House, Fair-street, Horselydown, S.E.—ED.]

MORTAR INSPECTION AT PLYMOUTH.

The Borough Surveyor reports that he had examined during the past month four samples of motar taken from builders. Three of these samples were in conformity with the by-laws, but the fourth was found to be deficient in lime, due to the use of slaked lime instead of unslaked.

EDITORIAL SUMMARY.

"The Arrangement of Our Museums" is the title of the leading article, which deals with the discussion now in progress in the columns of the *Times*.

A second leading article dealing with new methods of measuring the vitiation of air appears on p. 468.

In Notes (p. 469) will be found observations on: "The Railway Commission"; "The Accumulation of Books"; "The Crystal Palace"; "Indian Art and Archæology"; "Wimbledon Common Extension"; "Changes at the Admiralty"; "The Architect as 'Decorator.'"

A report, by Mr. R. G. Lovell, on the Ninth International Congress of Architects, held in Rome at the beginning of the month, was read at the last meeting of the Society of Architects by Mr. Lovell, who was the Society's official delegate at the Congress. An abstract of the report appears on p. 470.

An abstract of a paper on "The Microscopical Examination of Architectural Material," recently read before the Glasgow Architectural Craftsmen's Society by Mr. John S. Glen Primrose, lecturer on metallurgy at the college, is given in this issue, p. 471. Some illustrations accompany the report.

An abstract of a lecture on "Landscape Architecture," recently read by Mr. Thos. H. Mawson, Hon.A.R.I.B.A., before the Gloucestershire Architectural Association, appears on p. 474.

Archæological Societies (p. 475) include brief notices of meetings of the Surrey Archæological Society (Visit to Charterhouse) and the Royal Archæological Institute ("Art and History in Westminster Abbey").

Book notices (p. 477) include: "The Cathedrals of Central Italy"; "Practical Mathematics and Geometry"; "Mill and Factory Wiring"; "Practical Advice on Gasfitting," etc.

In our Correspondence Column (p. 478) will be found letters on: "Architects and Shop Designs"; "White-Lead"; "The Breaking-up of Landed Estates"; "The R.I.B.A. and the Society of Architects."

The Monthly Review of Civic Design, illustrated (p. 481), consists of: "A Notable Paris Improvement"; "Schöneberg Electric Railway"; and Notes.

The Building Trade Section (p. 485) includes: "The Railway Commission Report"; "Duties on Land Values"; "The Employers' Parliamentary Council"; "Reinforced Concrete in Underpinning"; "London Master Builders' Association"; "Government Contracts"; "Projected New Buildings in the Provinces"; "Applications under London Building Acts, 1894 to 1909," etc.

Some awards accorded to British exhibitors at Turin Exhibition are given on p. 489.

Law Reports (p. 489) include brief reports of the following cases: "Schworer *v.* Bethnal Green Borough Council"; "Minter *v.* Waldstein."

In Legal Column (p. 489) some observations will be fonnd on "Deposits on Contracts for Sale," and "Oil on Roads."

MEETINGS.

FRIDAY, OCTOBER 27.

Glasgow Technical College Architectural Craftsmen's Society.—Professor Gourlay on "The College Diploma and Certificate Courses in Building." 7.45 p.m.

SATURDAY, OCTOBER 28.

Institution of Municipal Engineers.—Visit to Brentwood Sewage Disposal Works.

MONDAY, OCTOBER 30.

Architectural Association.—Mr. H. H. Hill, B.A., on "The A.A. Excursion to the Loire, 1911." 7.30 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Renaissance Palaces and Villas of Rome." 5 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "Western Asiatic Architecture." Lantern illustrations. 4.30 p.m.

Junior Institution of Engineers (at the Institution of Electrical Engineers, Victoria-embankment).—Annual general meeting, followed by annual general meeting of the Benevolent Fund contributors, 7 p.m., and at 8 p.m. paper, entitled "Notes on Design and Construction in Gas Works," by Mr. George Evetts, Assoc.M.Inst.C.E.

TUESDAY, OCTOBER 31.

University of London (University College).—Mr. Arthur H. Barker, B.A., B.Sc., on "The Real Nature of the Problems in Heating and Ventilation Awaiting Solution by the Engineer"—III. 5 p.m.

Battersea Polytechnic.—Mr. J. G. Clark on "Gas Lighting." 7.30 p.m.

WEDNESDAY, NOVEMBER 1.

Royal Archæological Institute.—Mr. A. Hamilton Thompson, M.A., F.S.A., on "The Registers of John Gynwell, Bishop of Lincoln, for the Year 1349." 4.30 p.m.

THURSDAY, NOVEMBER 2.

Architectural Association Camera, Sketch, and Debate Club (Ladies' Night).—Mr. Edwin Gunn on "Woman as a Domestic Architect." 7.30 p.m.

ILLUSTRATIONS.

No. 93, Mortimer-street, W.

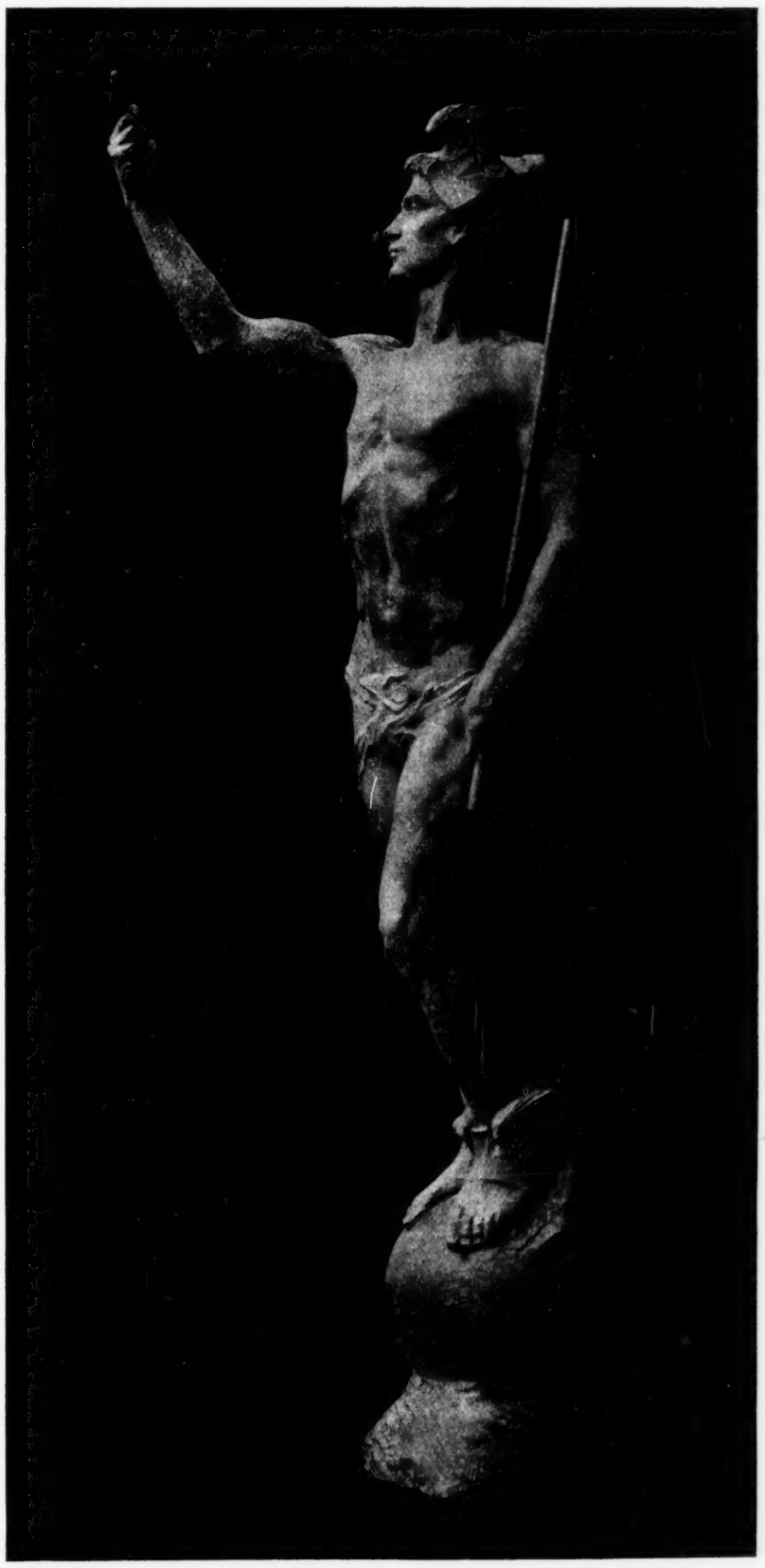
THE accompanying drawing of this building, photographs of which appeared in the *Builder* of October 15, 1910, shows a treatment for premises planned to contain shops and showrooms in the front on either side of a corridor leading to a hall in the rear, while a staircase connects a second hall in the basement and office rooms in the upper part of the building.

The elevation is carried out in Portland stone, with bronze wreaths in the frieze, the shield and attendant ornaments and the fanlight over the entrance doorway being also in bronze. The windows are of wrought-iron glazed internally.

Messrs. William & Edward Hunt were the architects, and Messrs. H. & E. Lea the general contractors.

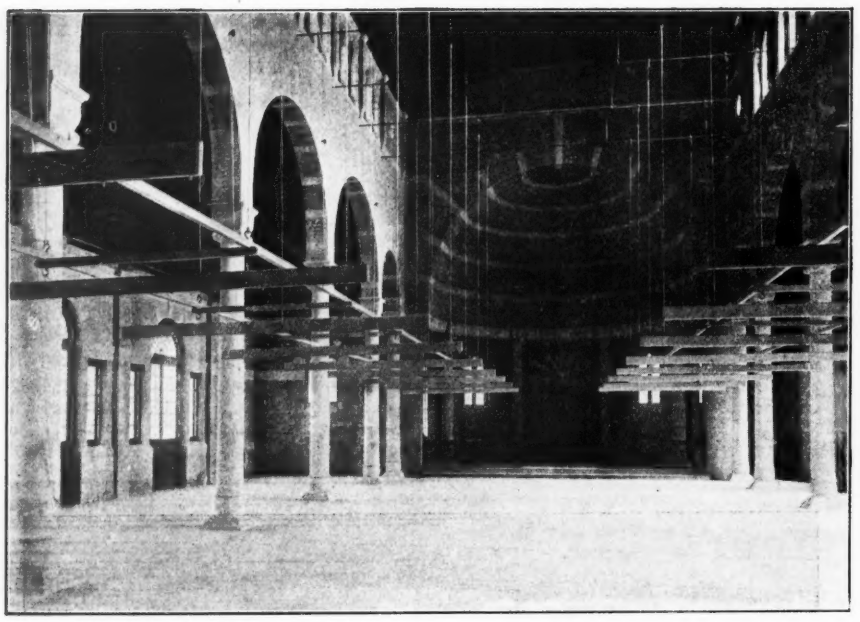
Business Premises, Gray's Inn-road.

THIS building, recently erected by Messrs. Hart & Waterhouse, comprises offices and a board-room, occupying the whole width of the building on the first floor. Lawrence's 2-in. red bricks and Portland stone are employed



Mercury. By Mr. A. Stanley Young.

Plaster Model, shown at the Royal Academy Exhibition, 1911, of Finial, 7 ft. 6 in. high, erected in teak on business premises in Gray's Inn-road. (*See Plates.*)



Presbyterian Church, Umballa.
Mr. James Ransome, F.R.I.B.A., Architect.

or the walling, and the roof is covered with Westmorland slate.

The style is an adaptation of early Renaissance. The large oriel window in the centre is supported upon lions and has sculptured panels illustrative of the work carried on in the building. The carved work was entrusted to Messrs. Aumonier. The terminal figure on the roof, of which a detail view is published, was carried out by Mr. Stanley Young.

Bruges : La Tour des Halles.

THE drawing from which our reproduction was made was executed some years ago and was shown then at the Sketch Club Exhibition at the Royal College of Art. It obtained Professor Beresford Pite's prize in the Architectural Drawing Competition (black-and-white). It is an early example of the work of an artist who has since achieved considerable success with his etchings, sometimes of architectural subjects; and it is interesting partly on that account and partly because of the historical significance of the buildings represented.

Presbyterian Church, Umballa.

WE illustrate an interior and exterior view of an unconsecrated church, designed for erection in the plains by Mr. James Ransome, F.R.I.B.A., under the instructions of the Government of India.

Climatic conditions in the hills of India are sufficiently similar to those of our own country to call for no special treatment in the architecture of ecclesiastic buildings. The churches, therefore, are designed by a simple adaptation of early English Gothic suited to execution in the rough and dressed stones usually obtainable in the hills.

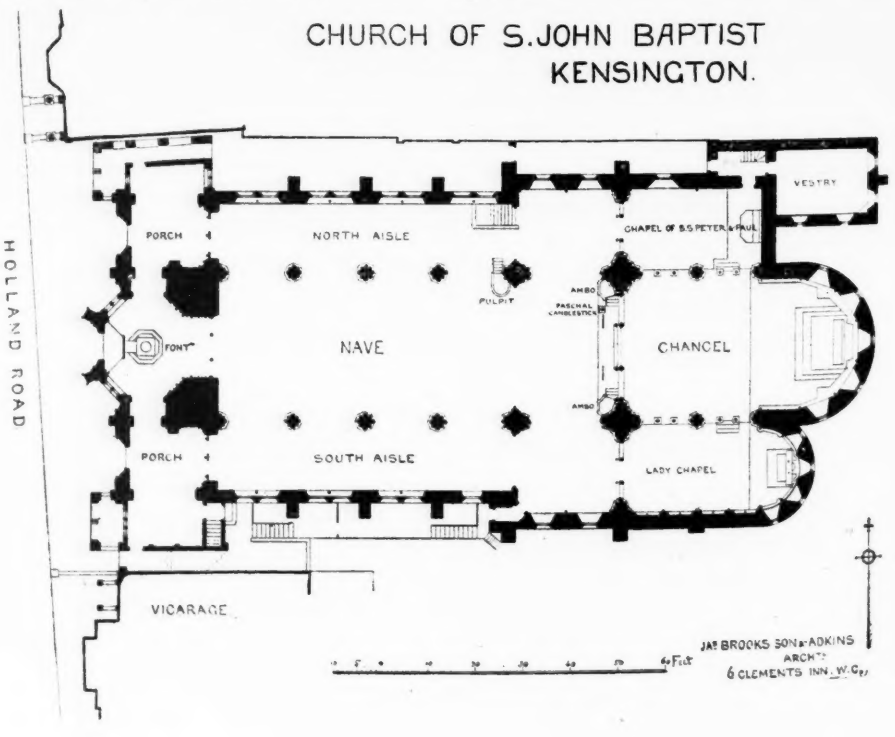
On the other hand, in the tropical climate of the plains, which necessitates the use of punkahs and the shading of all windows, except those facing north, the successful employment of Gothic architecture is a problem presenting many difficulties. For this reason the type design for churches in the plains has been based on Byzantine lines and suited to construction in brick, with stone bands and dressings very sparingly used, the latter material being in most parts of the plains considerably more costly than bricks. The effect of the interior of these buildings is necessarily marred by the obstructing punkahs.

Church of St. John the Baptist, Holland-road, Kensington.

THIS church was designed by the late James Brooks in 1872, and the first section, comprising the chancel, chapels, and vestries, was erected two years later. The work was carried on at several different periods, and at the time when the western section of the nave was taken in hand it was decided to abandon the original intention of erecting a large tower and spire, and a new design was prepared for the west end. This was illustrated in the *Builder* of April 23, 1892. The west wall, as then carried out, consisted of rough brickwork in which was inserted a part of the great doorway and the wheel window over it.

When it was decided to complete the church by the erection of the west front it was felt that the space occupied by the deep external porticoes of the second design might be better utilised by forming a baptistry and enclosed porches, and a third design was accordingly prepared with this object. This was to some extent a return to the original idea, as the lower stage of the tower had been intended to serve as a baptistry. The side porches are designed to be used also as classrooms, and the arcaded porticoes are to give shelter to children or others awaiting admission. The new buildings were dedicated by the Bishop of London on December 12, 1910.

The work has been carried out by Messrs. E. A. Roome & Co., of Basinghall-street, under the superintendence of Messrs. Jas. Brooks, Son, & Adkins. The statue of St. John Baptist over the central entrance is the work of Mr. J. E. Taylerson, of Marney-road, Lavender-hill, who has also executed the architectural carving. The font was altered and re-erected by Messrs. J. Whitehead & Sons, of Imperial Works, Kennington Oval. The oak-screen for the arch between the baptistry and nave was made by Mr. A. Robinson, of the Bloomsbury Carving Works, and contains oak statuettes of the Blessed Virgin and St. Gabriel in the centre opening, with synagogue and church on either side. These statuettes were entrusted to Mr. Taylerson, who has prepared also the stone figures of the Wise and Foolish Virgins, placed on corbels in the jambs of the arch.



COMPETITION NEWS.

Manchester Library and Art Gallery.

We understand that at the meeting of the Manchester City Council on Wednesday it was decided to hold over the discussion on the assessor's report in this competition until the first week in December, and that the award is in favour of design No. 4.

Welsh National Eisteddfod, 1912.

In connexion with this meeting, to be held at Wrexham next September, a competition will be held in the Arts, Crafts, and Science Section with the subject "The Welsh Housing Question and Designs for Workmen's Cottages." The chief prize is 50*l*. Mr. T. Taliesin Rees, F.R.I.B.A., and Mr. A. Williams, of the Letchworth Garden City, are the adjudicators, and Mr. Henry T. Hare, F.R.I.B.A., is the professional co-adjutor or umpire. Competitors are requested to have special regard to Welsh physical conditions not only in building on the flat but on hillsides. A good solution of hillside planning is desired. Designs may be accompanied by a treatise dealing with the general subject of housing conditions as they now exist, either in Wales generally (including Monmouthshire) or in any particular Welsh county or group of counties. Conditions of the competition may be obtained from the Welsh Housing Association, 9, Temple-chambers, E.C.

Town Hall, Trouville.

In the competition for a Town Hall at Trouville the designs of MM. L. & P. Farge, of Paris, were awarded the first prize; those of M. Cargill, of Le Havre, and M. Greber, of Paris, were placed second and third respectively.

FIFTY YEARS AGO.

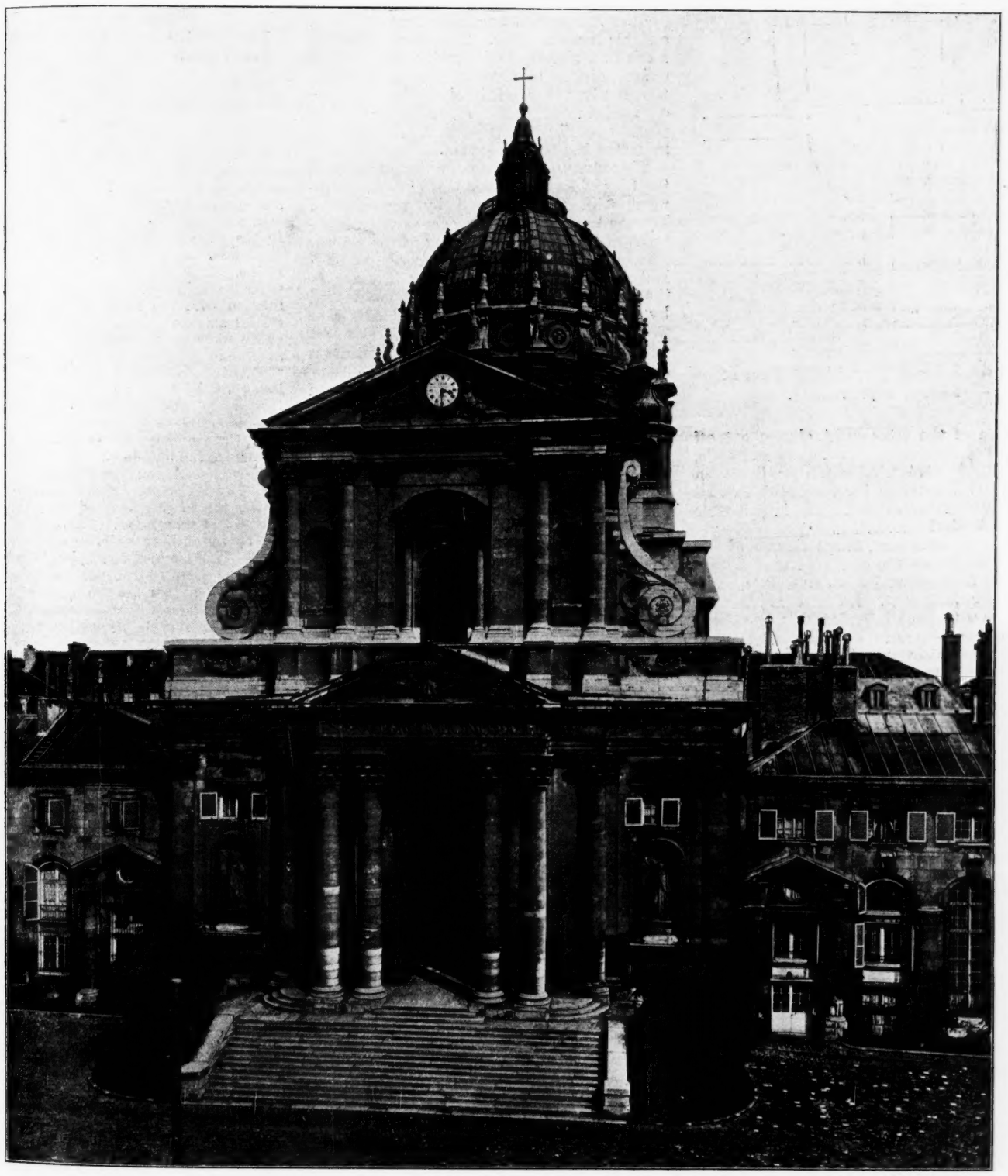
From the *Builder* of October 26, 1861.

The Temple.

THE Temple is in a state of great bustle. The Middle Temple Library is to be opened by the Prince of Wales on the 31st.

Goldsmith's house has followed Dr. Johnson's, and the church has been opened on the north side, where a considerable area will be preserved, and where a set of residences, "Middle Temple Chambers," is being erected by Messrs. Lucas. Mr. St. Aubyn is the architect, and this gentleman, in conjunction with Mr. Smirke, who acts for the Inner Temple, is now considering what is to be done with the church. The removal of the house over the porch has exposed a western wheel window in the Norman Round, the retention of which will render the proper covering of the porch a problem.

MONTHLY REVIEW · *of* · CIVIC DESIGN.



[*Photo. by Kuhn.*

La Chapelle du Val de Grâce, Paris.

A NOTABLE PARIS IMPROVEMENT.

SUCH measure of poetic justice as circumstances permit is at last being paid to the memory of the greatest artist of the Renaissance in France. The church of the Benedictine Monastery of Val de Grâce, in Paris, should have been the crowning achievement of the matured genius of François Mansart. Its history is one of the tragedies of architecture. Founded by Anne of Austria, the wife of Louis XIII., in fulfilment of a vow to build a noble church on the birth of the Dauphin, the foundation-stone was laid by Louis XIV., when a child of seven years old, in 1645.

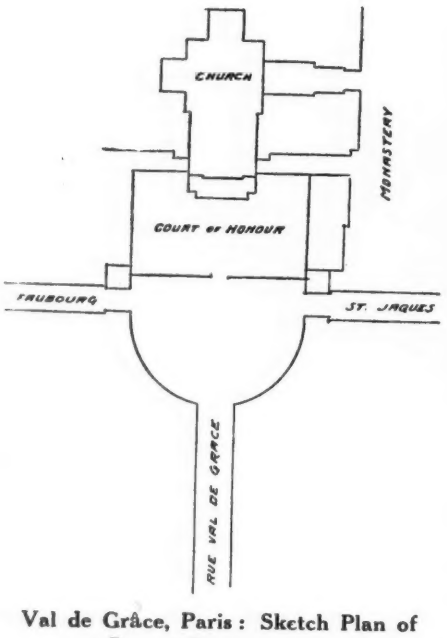
François Mansart was the architect, but after he had been in charge of the works for a twelvemonth and had raised the walls some 9 ft. above the floor level he was discharged and superseded by Lemercier, who, in turn, was followed by Le Muet and Le Duc.

Shortly after this crushing blow Mansart was, for political reasons, deprived of all his employment by the Court, and finally died in 1666.

Judging from the plan and general idea of the building, and also from the distinguished character of the interior work as begun by Mansart, this church should have been one of the masterpieces of the Renaissance, and even now the liberties taken with Mansart's design by his inferior successors cannot prevent it from remaining one of the most interesting. As it stands to-day its chief interest consists rather in its lay-out and approach, and the manner in which the central dominant feature is supported by the lower buildings of the forecourt, than in the actual features and details of the exterior, which fall only too short of what might have been had Mansart been permitted to finish it.

But, although it is impossible now for a more appreciative generation to restore Mansart's conception to its original artistic completeness, it has been found possible to deal with its surroundings on the lines he suggested.

The plan of the church is a Latin cross with a dome on the intersection. This is generally acknowledged to be a fundamental mistake, as the nave or narthex of the



Val de Grâce, Paris: Sketch Plan of Recent Improvement.

long arm of the cross must always cut off the view of the central dome, as at St. Paul's, or as at the Panthéon in Paris, where the Latin cross is said to have been adopted instead of the more natural Greek cross, in deference to ecclesiastical convention.

It is to be presumed, in the absence of any definite record to the contrary, that in this case also it was forced upon Mansart against his better judgment. Be that as it may, he appears to have intended this treatment and to have foreseen its consequences, as he designed a semicircular place, with a fountain and pyramid in the centre, on the opposite side of the Rue Faubourg St. Jacques, to enable the spectator to get far enough away from the building to see the dome to advantage. Had the dome been built on a Greek cross, thus bringing it farther forward, this special arrangement would not have been necessary, as the depth of the forecourt, some 200 ft., would have been sufficient to have given a proper view from the Rue Faubourg St. Jacques; although, of course, such a semicircular place would, in any event, have added considerably to the general effect.

It is here that the enlightened and sympathetic administration of the city of Paris has found an object worthy of its solicitude. No one of the many admirable improvements which it has in hand or contemplates for the future will give keener pleasure to the lover of art than this homage paid to the memory of the supreme genius of the Renaissance.

After 250 years François Mansart still lives, and his ideas fructify. The Municipality of Paris had already laid out the Rue Val de Grâce, giving a vista of the dome from the Boulevard St. Michel, and it is now engaged in forming the semicircular open place opposite the Court of Honour, as indicated in the sketch plan.

We cannot help contrasting the attitude of the City of Paris towards this historic monument with that adopted by the City of London towards the approaches and environment of St. Paul's, a building of far greater relative importance in the life of the city. But after such an encouraging instance of the immortality of a true idea as is afforded by the improvement at the Val de Grâce we feel justified in believing that Wren's idea will, in the fulness of time, come to fruition also.

A further interesting connexion between these two buildings is to be found in the unusual similarity between the general treatment and the detail of the internal order in both buildings. That at the Val de Grâce should be the personal work of Mansart, and as such, and as one of the latest examples of the work of the great artist of the day, it would naturally have excited the attention of Wren when studying the buildings of Paris. To those interested in such questions it may throw some light on the methods of Wren and on the debatable question of the amount of French work in St. Paul's.

SCHÖNEBERG ELECTRIC RAILWAY.

Zeitschrift für Bauwesen contains a lengthy article, with many interesting detailed illustrations, of an underground electric railway in the neighbourhood of Schöneberg, one of the suburbs of Berlin. We publish a view, with plan and section, of the Stadtpark Station, where the railway crosses at the lower ground level with the high level road taken over it.

Advantage has been taken of this rather unusual arrangement to obtain an interesting architectural composition, which should, we think, be very effective. There is evidently no reason why these engineering schemes should not prove an added charm to the neighbourhood if only they are rightly handled.

CIVIC DESIGN NOTES.

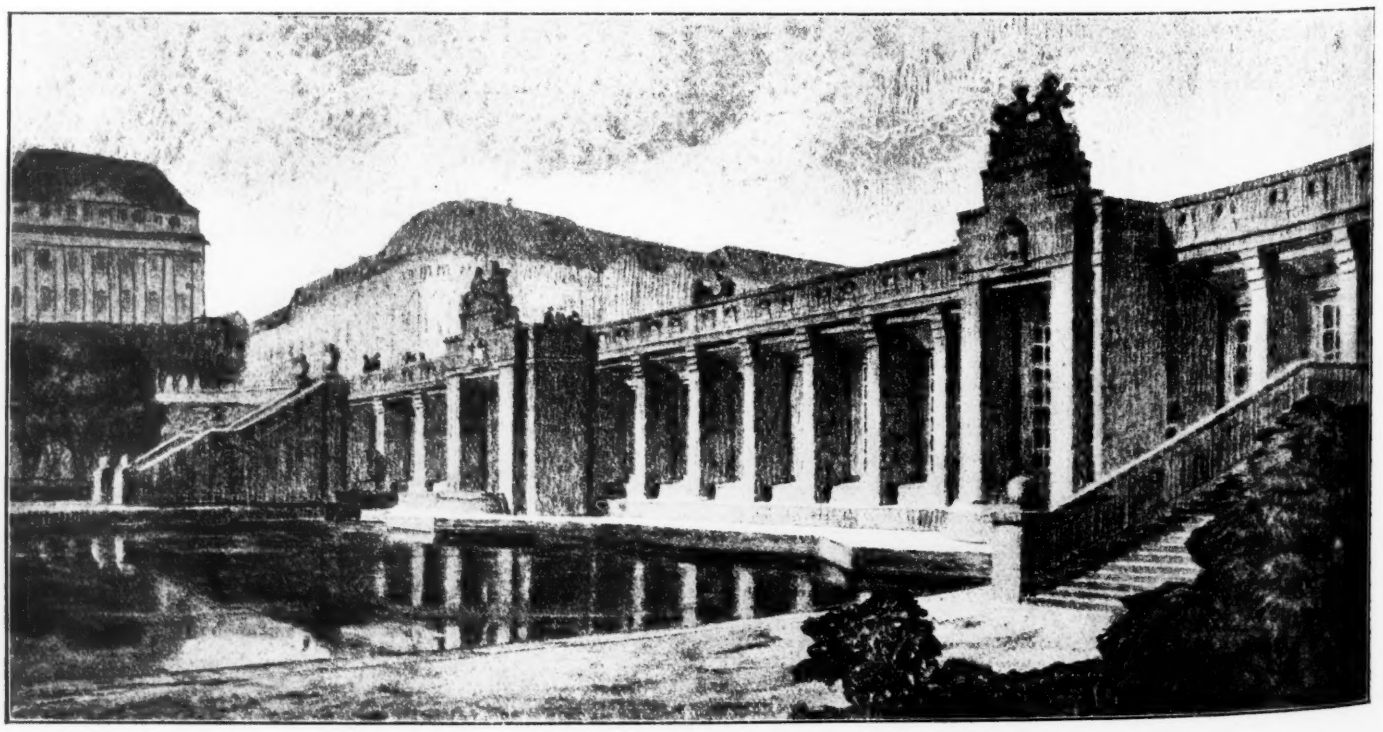
The Housing of Naples.

DIFFICULTIES in regard to dwellings are alluded to in the annual report of the British Consul at Naples, Mr. S. Churchill, who says it seems impossible to arrive at a criterion as to the real extent of the commercial development of that city. New streets with handsome up-to-date piles of flats—the rents of which are in advance of anything hitherto heard of there—are occupied as soon as they are licensed for letting; and yet rents are continually rising, showing unmistakably that there is a demand for more housing space. In the more densely-populated quarters of the town there are no tenement houses with vacant rooms. Tramway lines are being extended in order to bring the outer suburbs into closer relation with the town, so that the labouring classes may be able to find lodgings there, and cheap workmen's services have been instituted at certain hours of the day in order to enable workpeople to avail themselves of housing in a larger radius from the city proper. In order further to find a solution for the burning question of housing an ever-growing population, the Government is projecting a law to encourage the building of cheap dwellings which shall be exempted from property tax for a period of ten years, whilst houses for the better classes are to be exempted from taxes for half the period mentioned. These remedies are to be general all over Italy.

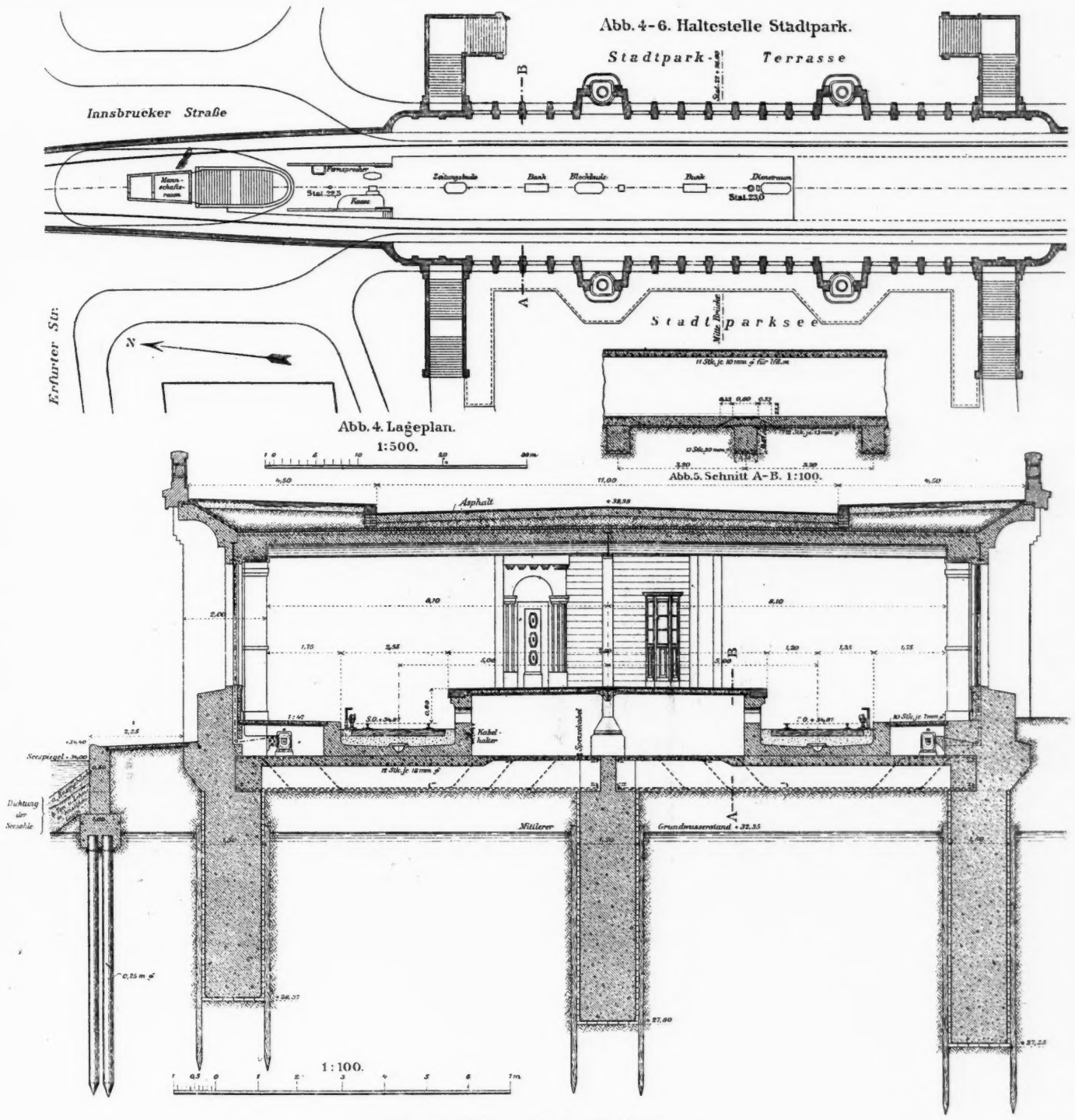
The Civic Council of Naples, in order to cope with its own local problem, has granted the sum of 12,000*l.* a year for the space of fifty years, free of interest and reimbursement, to an institution created for the construction of popular dwellings, the first payment to begin with 1911. The objects of the municipality is to enable the construction company to borrow money cheaply in order that the work may be proceeded with expeditiously. The Civic Council require the popular dwellings not to exceed a stipulated rent. The neighbouring town of Castellammare has been authorised to hold a lottery not to exceed 40,000*l.*, free of taxes, for the benefit of the company which is to construct workmen's dwellings there.

A Forgotten Embankment Scheme.

A SCHEME for a quay along the north side of the river from Charing Cross to Blackfriars appears to have been suggested in 1825 by a Lieut.-Colonel Trench, and to have been taken up and promoted as a financial enterprise by certain more or less important people of the day.



Electric Railway Station, Schöneberg.
(From *Zeitschrift für Bauwesen.*)

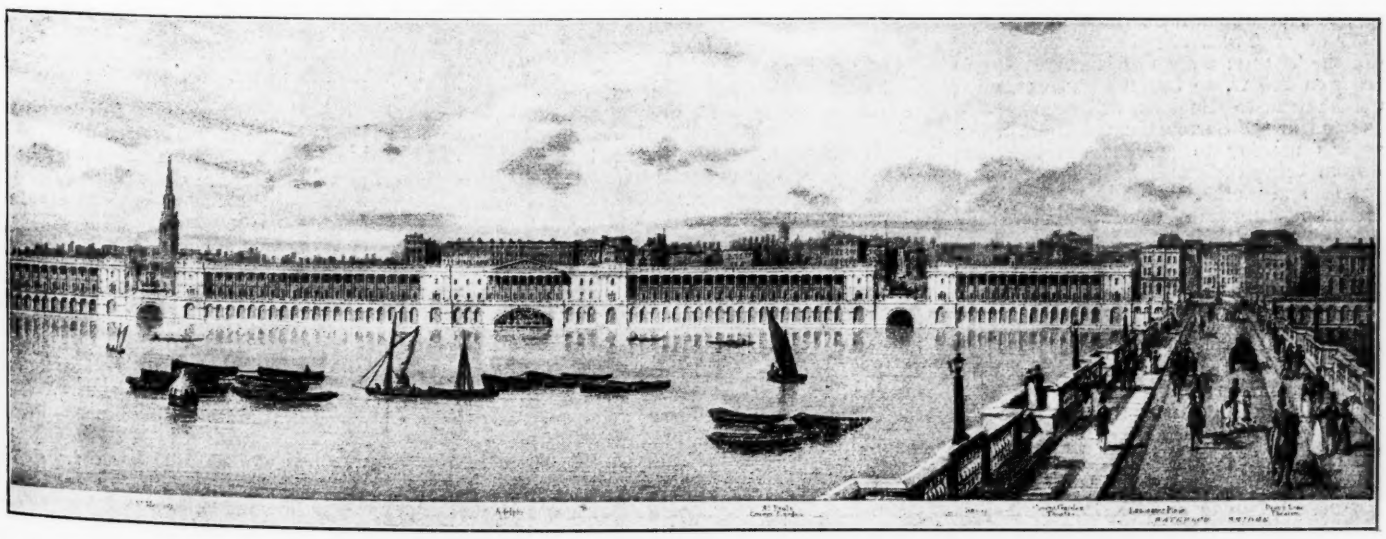


Electric Railway Station, Schöneberg.

(From *Zeitschrift für Bauwesen.*)

Viewed in the light of a commercial speculation, it is difficult to imagine it successful, and it may be owing to this fact that nothing seems to have come of it. This perhaps is not altogether to be regretted, for, considering the standard of work of that day, it is doubtful whether it would have proved to be an artistic success either. Such an undertaking is only excusable if done supremely well, and for that it was 150 years too late or too early.

The view we illustrate shows the treatment of the bank from Charing Cross to Waterloo



Part of an Improvement Scheme for the Embankment proposed in 1825 by Lieut.-Colonel Trench.

Bridge. The idea seems to have been to carry on the basement treatment of Somerset House with water-gates giving access to streets or wharfs behind the screen. This treatment has more than once been proposed for the south bank of the river as producing a fine monumental effect, while providing facilities for the warehouses and docks of a busy commercial quarter.

Whatever may be said against such an arbitrary treatment of the river frontage, its general effect, however tame and uninteresting it might have been in detail, would at least have been more dignified than the present jumble of uninteresting buildings on the western side of Waterloo Bridge. Save for the Embankment, which forms a fine base-line, this part of the river bank is as much in need of comprehensive treatment to-day as it was in 1825.

Rochester and Town Planning.

A SCHEME formulated by Rochester Corporation has failed to secure the sanction of the Local Government Board upon the ground that Crown lands are exempted from town planning schemes.

Workmen's Dwellings in Greenock.

MANY houses in the poorer part of Greenock having been found undesirable for habitation they have been closed, and the Corporation has appointed a Committee to report on the possibility of rebuilding under the Housing and Town Planning Act, 1909.

Street Widening at Bristol.

ON September 22 a Local Government Board inquiry was held in respect to various proposals of the Bristol City Council for street improvements. These included the widening of Victoria-street, St. Philip's Marsh; West-street, St. Philip's; Victoria-road, Bedminster; Hotwell-road; Rupert-street; and Cheltenham-road. The total sum proposed to be borrowed for these purposes was 2,000*l*.

Dublin Citizen's Association and Town Planning.

THE Executive Committee of the Association noted with satisfaction that as an outcome of the suggestion made in the paper read on the subject at the Ui Breasail Exhibition and Congress of the Royal Institute of Public Health, under the auspices of the Association, by Mr. James Vincent Brady, C.E., steps are being taken for the formation of an Irish Housing and Town Planning Association of a permanent character. The Committee were further gratified to perceive that the Public Health Authorities of the city were taking active steps to give effect to the suggestions contained in the pamphlet issued by the Association dealing with the powers vested in the Corporation under the Housing of the Working Classes Acts.—*Freeman's Journal.*

Twickenham Town-Planning Scheme.

A STATUTORY meeting of owners and lessees of property in Twickenham was held at the Town Hall recently to consider the town-planning scheme promoted by the District Council.

The Surveyor (Mr. Pearce), in describing the scheme, said that the area scheduled comprised 1,880 acres, of which 1,520 acres were within the parish of Twickenham. On the Surrey side of the Thames a strip of land, varying in width from 100 ft. to 300 ft., and extending from Richmond to Kingston, had been secured and vested in the Surrey County Council, but there was nothing to prevent the adjoining land from being disfigured by the erection of factories and other unsightly buildings. Important new means of communication could also be opened up, including a bridge from Eel Pie Island.

Mr. Cole, who represented the War Office, asked for Kneller Hall and Hounslow Heath to be excluded from the scheduled area, stating that the Local Government Board had no power to sanction the inclusion in the scheme of any Crown property.

This exclusion of Crown property from the scope of the Act is a point that may cause trouble in the future unless those responsible for the administration of the Crown lands show an equal amount of discretion and good taste when carrying out works within the area of a scheme. Considerable annoyance was caused in Edinburgh by the way in which the Government officials ignored the amenities of the neighbourhood in one of the residential streets. In the case of Hounslow Heath and Kneller Hall we presume the main idea of the War Office would be to preserve them as they are now, and not to promote building schemes which might clash with the general town planning scheme.

Bruxelles-aux-Champs.

Plan d'ensemble et Profil en Long de la jonction des Boulevards de 2e ceinture avec ceux de 1e ceinture.

Extension of Streatham Common.

IT is proposed to extend Streatham Common by the acquisition of the Rookery Estate of about 3 acres at a cost of 3,000*l*. The London County Council, having inquired whether the Wandsworth Borough Council would be prepared to subscribe towards the expense, a sum of 300*l*. was voted by the Wandsworth Council, in spite of the opposition of one of the Councillors, who thought that the Common was big enough, "taking into consideration the dog-in-the-manger attitude of the London County Council in refusing to give up a small corner of the Common for a public improvement." If the London County Council had not taken up this dog-in-the-manger attitude we presume the Common would not be big enough.

Bruxelles-aux-Champs.

THIS scheme, by E. Stases engineer, and H. de Bruyne architect, for dealing with the whole problems of the outskirts of Brussels, and for taking advantage of the open spaces and pleasant rural spots still remaining in close proximity to the city, is, in the authors' words, an attempt "to transform the circular expansion of the town into a star-shaped figure, between the points of which would be preserved for ever light and breezy intervals promising better things beyond."

It was recently submitted to the Société Centrale d'Architecture, and formed the subject of a paper at the Town Planning Conference at the Royal Institute of British Architects, by whose courtesy we are enabled to publish this plan.

A Possible Garden Suburb.

A RESIDENT in Beulah Hill writes to express surprise that, at a time when so much is heard of a high situation, bracing air, and beautiful surroundings as necessities for a place of residence, the fine wooded slopes of Norwood should have escaped the notice of those on the look out for the nucleus of a garden suburb. Within easy reach of town, and adjoining main roads already paved, drained, and lighted, are acres of meadows and timbered slopes as high as the dome of St. Paul's, commanding extensive views of the Surrey Hills, and with a statistical death-rate of only 8 per cent.

THE BUILDING TRADE.

THE RAILWAY COMMISSION REPORT.

THE Royal Commission appointed to inquire into the working of the conciliation scheme in connexion with railways is to be congratulated upon having concluded its labours, and issued a unanimous Report in a remarkably short space of time, without any of the delay too often associated with the appointment of Royal Commissions.

As far as the general public is concerned, by far the most important finding of the Commission is that which relates to the recognition of the trade unions. On this point the Commissioners report:—"We think that, with their great responsibilities, the companies cannot, and should not, be expected to permit any intervention between them and their men on the subjects of discipline and management." The companies, it will be remembered, contended that any intervention between themselves and the men on questions of discipline and management would render it impossible for the companies to carry out their statutory duties, and would endanger the public safety.

Conciliation Boards, according to the recommendations of the Commissioners, as heretofore, may deal with questions relating to rates of wages, hours of labour, or conditions of service other than matters of discipline and management, and, as regards the Conciliation Boards, powers are proposed to be given to the men to appoint a secretary, whether an employee or a person outside, who shall act as their advocate, but shall not have power to vote unless he be a duly elected member. Under the scheme of 1907 such a power was not conferred until the final stage of conciliation—an arbitration—had been reached, but under the new scheme the idea is that the men's advocate should have cognisance of the proceedings in the earlier stages.

A comprehensive scheme of conciliation is now proposed by the members of the Commission into the details of which we do not prefer to enter here; the provisions of the scheme include the abolition of the Central Board, which, it will be remembered, was a step which obtained support from witnesses on both sides, and they, as far as possible, are directed to securing finality for the decisions of the Conciliation Boards. Thus Art. 46 lays it down that "All settlements arrived at, whether by agreement of the two sides or by the decision of the Chairman, shall be final and binding for the periods of operation on both the company and the employees, the ratification of neither of these parties being required." In this connexion, however, the Commissioners point out that they have not considered it their duty to prescribe how contracts are to be enforced nor how the breach of them should be penalised; but they make an appeal to railwaymen to maintain the high standard and traditions of the service. Existing agreements and awards, it is recommended, should remain in force until July, 1912, and thereafter, unless amended or nullified; the new scheme to remain in force until November, 1914.

As far as can be seen on first inspection, the Commissioners have not only worked expeditiously, but thoroughly, and have produced a scheme deserving, at any rate, of careful consideration by all those who have any interest in industrial peace.

During the sittings of the Royal Commission we have abstained from making any comment on the English railway strike and the evidence produced before the Commissioners, but now that the question is no longer *sub judice* we may remark on the extraordinary absence of any grievances disclosed in the evidence which could justify the men in the action taken by them in dislocating the whole carrying trade of the country. The Commissioners do not find the companies guilty of any obstructive tendency to prevent the full fruition of the scheme of 1907. On the contrary, they find that both sides considered arbitration as the real object of that scheme, and that the earlier stages of conciliation and negotiation through the usual channels were in consequence somewhat neglected. The Report appears to have been received with much dissatisfaction by a considerable body of railway workers—probably, as we hope, the result of not knowing what the Report really recommends.

That some grievances may exist in the railway service as in other industries no one would deny for a moment, but in the interests of the men we would urge them never again to be led into inflicting such grievous loss on the community and alienating the public sympathy by the ill-considered actions which have characterised the recent strikes, and for causes so little apparent.

DUTIES ON LAND VALUES: REPORT OF COMMISSIONERS.

THE Report of the Commissioners of Inland Revenue, dealing, as it does, for the first time with the duties on land values under the Finance Act, 1909-10, contains some information of interest, especially to those who, like builders, have an interest in dealings with land.

The Commissioners state that the number of hereditaments to be valued in the three kingdoms approximates some 11,000,000, and that some years must elapse before the provisional valuations can be completed; they also refer to the parallel of the Doomsday Book, and mention the fact that in one case at least property has been found to remain in the same family since the original Doomsday Book record—a fact historically interesting.

The Commissioners observe that "the increment value duty in the nature of things cannot be expected to yield much during the early years of its existence," and the truth of this observation is apparent; they also observe that, pending the setting up of the machinery of valuation, the collection of the reversion duty and the undeveloped land duty has been retarded, but it surely must be a matter for surprise that the duties on land values have but yielded 520,800*l*. In this sum is apparently included the mineral rights duty, which is stated to have realised the full amount expected, and from the total have to be deducted the heavy expenses incidental to the valuation, including the salaries of a very large staff.

Having regard to the observations of the Commissioners as to the difficulties to be encountered, and the feeling of general uncertainty engendered among landowners by this Act, the question may well be asked whether any other form of taxation more equitable in its incredence, less cumbrous in its machinery, and less liable to injure already depressed industries could not have been devised.

Under the heading "Reversion Duty" the Commissioners comment on the unexpectedly small number of returns, but 559 accounts having been received, and the duty paid in respect of undeveloped land duty appears to have been 1,189*l*. in 1909-10 and 1,162*l*. in 1910-11.

There is much other matter in the Report worthy of study, but we must refer our readers to the Report itself for further information.

THE EMPLOYERS' PARLIAMENTARY COUNCIL: THE TRADE DISPUTES ACT (1906).

THE following is a copy of a Memorial sent by the Employers' Parliamentary Council to the Prime Minister on October 20:—

"The undersigned Central Employers' Associations connected with the various industries in the United Kingdom beg leave most humbly to call your attention, and the attention of his Majesty's Government, to the grave evils which have arisen in consequence of the Trade Disputes Act, 1906, and to the present combination of labour unions for the purpose of promoting national strikes fraught with incalculable loss and immense suffering to the community.

It is submitted that recent events have demonstrated that picketing during trade disputes and strikes results in intimidation, frequently accompanied by outrage, violence, and destruction of property; and that the "peaceful persuasion" of a mob of unlimited numbers, who may "attend at or near a house or place where a person resides or works or carries on business or happens to be," is a form of tyranny so gross and monstrous as to completely negative the rights of every law-abiding citizen who declines to subject himself to labour-union domination.

It is also submitted that, the law having relieved labour unions of responsibility for their actions during trade disputes, these bodies are thus specially privileged to do wrong to others, and that such immunity has resulted in great injury to the trade and commerce of the country.

It is further submitted that the federation of the labour unions of the United Kingdom into one gigantic body having for its object the organisation of strikes on a national scale is a conspiracy against private freedom, industrial peace, and national well-being, with which no country governed by just laws should be menaced.

It is therefore most respectfully urged:—

I. That picketing should either be rigorously suppressed or the number of pickets should be limited to two, and such pickets should be required to wear a distinguishing badge, and to attend only where a person works or carries on business.

II. That unions, whether of workmen or masters, should be subjected to the ordinary law of the land, and made responsible, like all other classes of the community, for their actions.

III. That a federation of unions for the purpose of "paralysing the country" by means of a general strike or lock-out, throwing all industries and communications into disorder, and stopping the food supplies of the nation, should be suppressed as an unlawful combination and immediately so proclaimed."

The memorial is followed by the names of a number of employers' associations, including the Employers' Parliamentary Council; the National Federation of Building Trades Employers of Great Britain and Ireland; London Master Builders' Association; Scottish Building Trades Federation; the Glasgow and West of Scotland Building Trades Employers' Council; Glasgow Building Trades Exchange; National Federation of Slate Merchants, Slaters, and Tilers; the National Association of Master Monumental Masons and Sculptors; the National Association of Master Heating and Domestic Engineers; National Association of Master Plasterers; Scottish Master Plasterers' Association; the Confederated National Association of Master Plasterers, Plumbers, and Slaters; the Institute of Plumbers; the National Association of Master Plumbers; United Kingdom Granite and Whinstone Quarry Masters' Association; the London Association of Master Decorators; the Central Association of the Lime and Limestone Industry of Great Britain.

LONDON MASTER BUILDERS' ASSOCIATION.

A COUNCIL meeting of the London Master Builders' Association was held at Koh-i-Noor House, Kingsway, W.C., on Thursday, the 19th inst.

The Finance Committee's report was read and approved, and the report of the Carpenters' and Joiners' Conciliation Board meeting was reported.

The Council gave its consideration to matters relating to the Industrial Council appointed by the Board of Trade, to a petition that had been lodged against the Trade Disputes Act (1906), and to various other trade matters, to the erroneous report in the Press of the annual meeting of the London Association of Slate Merchants and Master Slaters, and to the next issue of the handbook.

The following were elected as Associate members of the Association:—The Metropolitan Asphalt Company, Messrs. C. Loosley & Sons, and Messrs. F. A. Clark & Son.

The following were nominated for membership:—As ordinary member, Mr. A. E. Symes; Associates, Messrs. J. Russell & Co., Ltd.

REINFORCING CONCRETE IN UNDERPINNING.

OUR attention has been called to an exceedingly ingenious and very simple method of reinforcing concrete in underpinning. Mr. C. R. Price, of 87, Bishopsgate, E.C., the originator of the idea, has explained to us the working of it, and mentioned the names of several well-known architects to whom he has shown the drawings, and who have expressed their warm approval of it.

It has always been a difficulty with those who have had much experience in underpinning how to be sure of getting a proper adhesive setting between the blocks or piers of concrete which of necessity have to be put in in 3-ft. or about 3-ft. lengths, and no matter how particularly the work is supervised, or how good a builder is engaged, an ordinary workman is quite capable of leaving a film of clay or earth on the first piers when filling in the intermediate pieces; then, let the rest of the work be ever so well done, the whole is no better than that one doubtful joint. Concrete is put in to distribute the weight over a large area, and, seeing that the bottom of the concrete is in tension, it is at once apparent how vital such weakness is.

The whole object of Mr. Price's idea is:—(1) To make it impossible to get any earth at any time between the meeting faces of concrete, thus ensuring a clean joint; (2) to get a grooved and tongued or joggled joint, thus avoiding the straight joint and its weakness; and (3), by far the most important, to get a continuous length of adequate reinforcing throughout the whole length of the underpinning.

The cost, in any case, is very moderate, and in many cases money can actually be saved, as district and borough surveyors will accept less depth of reinforced concrete than would be required in the ordinary way.

We are able to reproduce a drawing of the scheme, which explains itself, and Mr. Price offers to send to any who are interested details and further particulars if they will apply to him at 87, Bishopsgate, E.C.

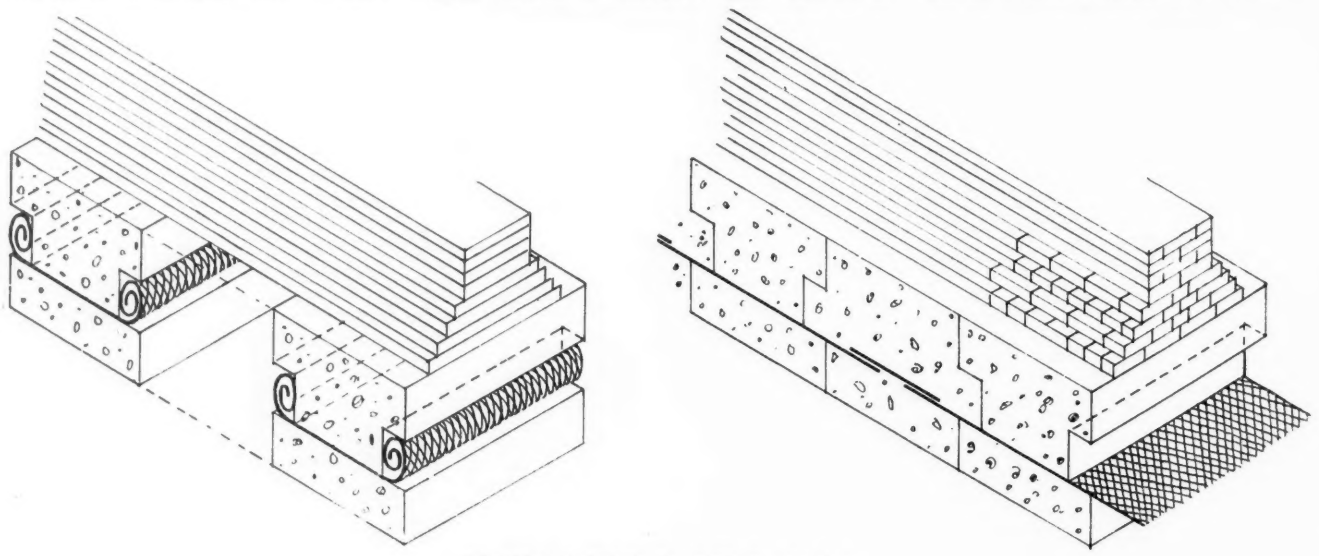
GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government departments named:—*War Office:* works services—alterations and additions to York Military Hospital—Mr. W. Bellerby, Hungate Sawmills, York; alterations, etc., at Duke of York's headquarters, left wing of main block—Messrs. Thomas & Edge, Woolwich; alterations, etc., to married quarters, Ashton-under-Lyne—Mr. J. Ridyard, Railway Sawmills, Ashton-under-Lyne; erection of annexes and alterations to married quarters, Canterbury—Messrs. Johnson & Co., 97, Southwark Bridge-road, S.E.; erection of annexes and alterations to married quarters, Beverley—Mr. A. Robinson, Woodbine Works, Idle, Bradford; erection of annexes and alterations to married quarters, Gosport—Mr. J. Hunt, South Wharf, Cleveland-road, Gosport; erection of barrack blocks, Whittington Heath Barracks, Lichfield—Messrs. T. Lowe & Sons, Curzon-street, Burton-on-Trent; erection of canteen and recreation establishment at Horfield Barracks, Bristol—Messrs. G. Pollard & Co., Taunton; erection of fire-engine shed, etc., Preston—Mr. R. Holt, 50, Badger-street, Bury; erection of officers' quarters, Netheravon—Messrs. W. E. Chivers & Sons, Devizes; improvements to sergeants' mess, Halifax—Messrs. T. Obank & Sons, Cyprus Works, Thackley, Bradford; installation of heating apparatus, left wing, main block, Duke of York's headquarters—Messrs. E. Deane & Beal, Ltd., 1, Arthur-street East, London Bridge; installation of heating apparatus, Hilsea Hospital—Messrs. J. F. Phillips & Sons, Queen Anne's-chambers, S.W.; miniature rifle range, Wormwood Scrubbs—Messrs. T. Wood & Sons, Ltd., Crockerhill, near Swanley, Kent; periodical works services at Norwich and Woolwich (hospital)—Messrs. Skevington Bros., Bateman-street, Derby; provision of brick fireplaces to officers' quarters at Bulford—Mr. J. Crockerell, Bulford Camp; renewing paving and fittings at troop stables, Hounslow—Messrs. Johnson & Co., 97, Southwark Bridge-road, S.E. *India Office, Store Department:* bridgework—Messrs. Braithwaite & Kirk, West Bromwich; Messrs. Brandon Bridge Building Company, Motherwell; Messrs. Dorman, Long, & Co., Middlesbrough; Patent Shaft, etc., Company, Wednesbury; tiles—Messrs. Malkin Tile Works Company, Burslem. *Crown Agents for the Colonies:* steel bridgework — Thames Ironworks Shipbuilding and Engineering Company, Canning Town, E.; bridgework—Messrs. Sir W. Arrol & Co., Ltd., 32, Victoria-street, S.W.; cement—Messrs. Martin Earle & Co., Ltd., 137, Queen Victoria-street, E.C.; Barron's Cement Company, Ltd., 6, Lloyd's-avenue, E.C.; Associated Portland Cement Manufacturers, Ltd., 8, Lloyd's-avenue, E.C. *Office of Works:* builders' work, Eltham Palace restoration—Messrs. J. Thompson & Co., 43, Wood-street, Peterborough; General Post Office, north, extension of dining-room—Messrs. H. F. Webb & Co., Longfellow Works, Walthamstow; Glasgow Head Post Office, reinforced concrete work—Messrs. Perry & Co. (Bow), Ltd., 56, Victoria-street, S.W.; Stoke Newington branch Post Office, alterations—Messrs. J. Groves & Son, Forster-road, Tottenham; drainage, Houses of Parliament, revision of drainage and diversion of rainwater — North British Plumbing Company, Ltd., 15, Cartaret-street, S.W.; residences, Kew Gardens—Messrs. Dent & Hellyer, Ltd., 35, Red Lion-square, W.C.; urinals and fittings—Messrs. George Howson & Sons, Ltd., Eastwood Sanitary Works; General Post Office, laying pipes and ducts (Park Exchange Area, London)—Messrs. Grieg & Matthews, 35, Queen Victoria-street, E.C.; laying pipes (Leeds-Hull)—Messrs. Robson, Eckford, & Co., Hawick, N.B.; laying pipes from Chepstow River Bridge to Newport, Mon.—Mr. C. J. Nevitt, Bailey-street, Stafford; Mr. W. Dobson, Yeaman-lane, Edinburgh; laying pipes (West Ham)—Messrs. Grounds & Newton, Page Green, South Tottenham, N. *Metropolitan Police:* erection of a new police-station at Streatham—Messrs. Godson & Son, 215, Kilburn-lane, N.W. *Commissioners of Public Works, Ireland:* building works—erection of Castlerea Post Office, Co. Roscommon—Messrs. G. H. Dawson & Co., 99, Amiens-street, Dublin; drainage, Royal Irish Constabulary Depôt, Dublin—Messrs. Bairds, Ltd., Lower Abbey-street, Dublin; fittings, etc., Waterford Post Office—Mr. Alex. McDermott, Castle Hill, Enniscorthy.

GENERAL BUILDING NEWS.

ST. PETER'S CHURCH, HARROW.

The foundation-stone of this church was laid on October 16 by Lord Ashcombe. The new church will be built from the designs of Mr. G. H. Fellowes Prynne, F.R.I.B.A., of Westminster. The architect has chosen a free treatment of the Decorated style. As both the east and west ends are comparatively hidden from view, little elaboration of detail will be needed. The western entrance porches will be placed on either side of an apsidal baptistry, with other entrances to the church being placed at the west end of the north and south transepts. Separate entrances are also arranged for the chapel and vestries at the east end. The plan consists of a nave, 84 ft. long by 30 ft. wide, divided into five bays, giving accommodation for 450 right in front of the chancel. As before stated, a baptistry flanked by two large porches is placed at the west end. North and south lean-to aisles are placed against the three western bays of the nave arcade, and transepts are thrown out from the two east bays on either side. The north transept will form, as it were, the nave of the side chapel. The chancel, which is 39 ft. long by 27 ft. broad, gives accommodation for forty-four, including clergy and choir, and room for a sanctuary. The altar is raised five steps from the chancel, and nine steps from the nave floor level, and considerable space is allowed on the east wall, above the altar, for a future reredos or dossal hangings, so that the whole effect may be more spacious. Side passages are placed on either side of the chancel for returning communicants, and arches open north and south, giving a view of the east and from the side seats in the church. Over the passage on the north side a partly-hidden gallery will be constructed as a musicians' gallery, the organ chamber being placed on the opposite side over the vestries. A large choir vestry opens upon the side chancel passage, which also connects with the clergy, vestry, and sacristy, and a separate porch and lavatory are arranged for. The roof will be of barrel form, which from an acoustic point of view is found to be the best form of roof. The nave and chancel will be carried to one level, the apex being about 40 ft. from the nave floor level. The chancel arch will be carried to the whole height of the nave roof, a screen and rood beam being



Mr. Price's Method of Underpinning.

The diagram shows, for the purpose of convenience, underpinning carried out in 3-ft. lengths (it is quite immaterial for the scheme what lengths are done at a time, either of the concrete or the "dumplings" left in to carry the wall while underpinning). Presuming the concrete is to be 3 ft. deep, 12 in. is put in the bottom, and on to this is placed a length of strong and large mesh-expanded metal curled up at the ends; over these curled ends are placed sheet-iron covers, which can be re-used any number of times, and the remainder of the concrete is filled in. This is done in all the first piers, then when the intermediate pieces are tackled these curled ends are straightened out (over the 12 in. of concrete in the bottom) from each side towards one another, and another piece laid over the joint to ensure proper strength, and the result is a continuous length of reinforcing. Enormous additional strength over ordinary underpinning is obtained, and in many cases at less cost, because less bulk is required.

placed within the arch. The builders are Messrs. Webster & Cannon, of Aylesbury, whose tender for the complete work was 8,188*l.*

ADDITIONS TO COLLEGE, EXETER.

The plans for these new buildings were prepared by Messrs. Tait & Harvey, and the cost of erection has been about 16,400*l.* It is intended later on to erect a college hall and a building for the technical department.

NEW COUNCIL OFFICES, DUNFERMLINE.

The Parish Council have accepted the designs of Messrs. Muirhead & Rutherford, architects, for the new Parish Council offices, the estimated cost being 5,860*l.* This selection is the result of a competition among the local architects, Mr. Clifford, of Glasgow, being the adjudicator.

NEW PARISH HALL, LIVERPOOL.

Messrs. Morter & Dobie, of Liverpool, are the architects of St. Catherine's New Parish Hall, which is being erected at a cost of 1,500*l.* The seating accommodation is for 400, and the contract was carried out by Messrs. G. E. Marshall, builders, of Liverpool.

WEST OF SCOTLAND COLLEGE, GLASGOW.

At a recent meeting of the Governors of the West of Scotland Agricultural College, the question of new College buildings was considered. The Committee reported that there were three alternatives, viz.:—(1) To dispose of the present buildings in Glasgow and Kilmarnock and to provide a new College centrally situated on a suitable farm, and combining in one building or series of buildings all the requirements of the College in agriculture, dairying, and cognate subjects. (2) To retain the present buildings at Kilmarnock and to supplement these by the erection of additional buildings to meet the whole requirements of the College, excepting that provision be made in Glasgow for continuing evening classes there. (3) To extend the present buildings in Glasgow, or obtain additional buildings close at hand, with or without a demonstration area adjacent to the city, and to retain the present farm and dairy school at Kilmarnock. The matter was deferred, so that the question of relative costs could be ascertained.

THE COMEDY THEATRE.

The recent alterations and decorations at the Comedy Theatre have been made under the care of Messrs. Frank E. Whiting & Walter S. Peto, Messrs. Battley, Sons, & Holness were the contractors. The whole of the entrance has been taken out and fitted with a double row of new swing doors in waxed oak, the exterior reveals, steps, etc., being covered with Bastard marble. The old cramped vestibule, with its box office hidden under the gallery stairs, the bar for the stalls and dress circle, which occupied a space at the side of the vestibule, the passage running round the back of the dress circle, and the cloakroom, which was situated in one corner of the bar, have all been swept away, and covering the whole of this space is a new vestibule and box office. The vestibule is rectangular on plan, and all the woodwork is in waxed oak. The floor is laid in small squares, and the walls panelled to a height of about 8 ft. The style adopted is that of the Doric Order, the columns and pilasters being of grey scagliola marble with antique brass caps and bases.

NEW CABINET WORKS, BEDFORD.

New premises, known as the Bedford Cabinet Works, Bedford, have been erected to meet the requirements of Messrs. C. & R. Light, Ltd., whose chief offices and warehouses are in Curtain-road, London, E.C. The new works have been erected on land situated between the London-road and the Midland Railway, Bedford to Hitchin branch line, in accordance with the drawings and specification prepared by the architect, Mr. W. Prows Broad, London, the builders being Messrs. Nicholds & Reynolds, Ltd. The main buildings comprise three blocks, covering altogether an area of 45,826 super. ft., and which are connected by two enclosed corridors; each block has separate sanitary conveniences, and with the timber store, drying kilns, boiler-house, and fumigating chamber, cover a further area of 4,312 super. ft. all being of one story, with space for extensions and workmen's dwellings, etc. The plan of the buildings forms a parallelogram, as being best adapted for the purposes of the private railway siding, which has been constructed and connected to the above branch line for the requirements of these works only, and which has been made to run parallel with the premises. The walls are of purpose-made hollow concrete building-blocks, the lintels and finishings being reinforced and the quoins rusticated. The roofs are constructed on the north light principle, every regard having had in the spacing, so as to secure the maximum amount of light. The glazing is the patent system of Messrs. Helliwell & Co., Ltd., and was executed by them with their galvanised "Y" sections steel bars. The joinery was executed by Messrs. Samuel Elliott & Sons, Ltd., Caversham, Reading, the exit doors in corridors being fitted with "Panic" fittings, and glazed with ¼-in. Pilkington's wire-wove rolled plate-glass, the armoured fire doors being supplied by Messrs. Mather & Platt, Ltd., and fitted with attachments for self-closing in case of fire. The ventilation has been arranged with full allowance for all requirements, the fresh air supply being supplemented by openings in the external walls, with dog-legged flues, fitted with external and internal regulating gratings. The steam heating apparatus is on the vacuum system, the mains being 3-in. and 4-in. flanged cast-iron steam pipes in various sets, each set being provided with a fullway gun-metal valve and a nuvacuumette valve on the condense, drop branches being taken from the high level pipes and connected to the heating pipes. The steam heating works were executed by Messrs. Rosser & Russell, Ltd., to maintain a temperature of from 55 to 60 deg. Fahr., with the outside temperature 32 deg. Fahr. The boiler and chimney-shaft and works in connexion therewith were executed by Mr. C. F. Davis. The electric-power installation is supplied by the Bedford Corporation, a great feature being that the shafting for the machinery is in trenches below the floor level, the trenches being constructed of reinforced concrete and hollow concrete blocks, the whole being encased with asphalt executed by Messrs. Lawford & Co. The timber store and drying kilns have a cubical capacity of about 55,000 ft. and 4,600 ft. respectively.

TRADE NEWS.

The "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the Drill Hall, Lauder, N.B.

In reference to the article on Messrs. Arding & Hobbs's new premises, Clapham Junction, which appeared in our last issue, pp. 449-453, we may add that the whole of the Bath stone for the work was supplied by the Yockney and Hartham Park Stone Company, Ltd., from their "Ridge Park" Quarry.

The Church of England School at Holywell, Hunts, has recently been fitted with one of D. O. Boyd's hygiastic ventilating school grates, supplied by Messrs. O'Brien, Thomas, & Co., Upper Thames-street, London, and Excelsior Works, South Bermondsey.

The Cumberland Infirmary, Carlisle, is being supplied with Shorland's double-fronted patent Manchester stoves with descending smoke flues by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

Lines of Frontage and Projections.

Clapham.—Addition over No. 144, High-street, Clapham (Mr. J. S. Beard for Mr. S. H. Beard).—Consent.

Clapham.—Projecting clock in front of No. 192, High-street, Clapham (Greenwich Time, Ltd., for Electric Palaces, Ltd.).—Consent.

Dulwich.—Erection of porches in front of two houses on the eastern side of Underhill-road, Dulwich, southward of No. 102 (Mr. R. Johnson).—Consent.

Fulham.—Retention of a building next to No. 233, Stephendale-road, Fulham (Mr. A. J. Fuller).—Consent.

Hampstead.—Balcony over the porch at No. 27, Briardale-gardens, Hampstead (Mr. J. Gibb for Miss Macleod).—Consent.

Hampstead.—Erection of one-story buildings on the eastern side of West End-lane, Hampstead, northward of Tower-mansions (Mr. F. J. Stannard).—Consent.

Hampstead.†—Two houses with one-story bay-windows and porches on the northern side of St. Cuthbert's-road, Hampstead, next to Shoot-up-hill (Messrs. Rix & Wilkins).—Refused.

Kensington, South.†—Illuminated sign at No. 189A, Brompton-road, Kensington (Imperial Lighting Company).—Refused.

St. George, Hanover-square.—Additions at No. 36, Belgrave-mews South, next to the south-western side of Upper Belgrave-street, St. George, Hanover-square (Mr. F. W. Foster).—Consent.

St. George, Hanover-square.†—Projecting balcony at the second floor level at No. 24, Conduit-street, St. George, Hanover-square (Mr. A. B. Jackson for Mr. G. Boudou).—Consent.

St. George, Hanover-square. — Projecting oriel window in front of No. 63, Brook-street, St. George, Hanover-square (Mr. G. T. Hine).—Consent.

Width of Way.

Bethnal Green, North-East.—Addition to St. Peter's Church, St. Peter's-street, Bethnal Green, next to the southern portion of St. Peter's-square (Mr. E. T. Dunn for Rev. W. H. Maynard).—Consent.

Hoxton.—Addition at the rear of No. 29, New Inn-yard, Hoxton, next to the passage-way leading to Reliance-square (Mr. F. M. Elgood for Mr. L. W. Thomas).—Consent.

Width of Way, Lines of Frontage, and Projections.

Hackney North.—Erection of No. 9, Stamford-grove East, Hackney, with a two-story bay-window and a hood (Mr. F. Bull).—Consent.

Lewisham.—Erection of six coal-shed buildings at the Merchant Taylors' almshouses on the eastern side of Brandram-road, Lee (Mr. R. H. Mew for the Merchant Taylors' Company).—Consent.

Marylebone, West.—Retention of a wood and glass covered way in front of No. 13, Elm Tree-road, St. John's Wood (Mr. H. W. Holman).—Consent.

Lines of Frontage and Construction.

Finsbury, East.—Three external iron gangways at the rear of No. 59, City-road, Finsbury, to abut upon the northern side of Oliver's-yard (Messrs. M. W. King & Sons for Mr. J. Kent).—Consent.

Hackney, South.—Temporary wood and iron building at No. 159, Chatsworth-road, Clapton (Mr. E. White).—Consent.

Holborn.—Erection of two iron and glass shelters, next to Drury-lane, at the Middlesex Music Hall, Drury-lane and Shelton-street, Holborn (Messrs. F. Matcham & Co.).—Consent.

Lewisham.—Temporary wood and glass showcase in front of No. 6, Stondon-park, Lewisham (Mr. E. Tompkins).—Consent.

Peckham.—Temporary showcase in front of No. 2, Rye-lane, Peckham (Messrs. Windybank, Samuell, & Lawrence).—Consent.

Width of Way and Construction.

Marylebone, West.—Temporary shed at No. 12, Gray's-buildings (Messrs. Steinway & Sons).—Consent.

Rotherhithe.—Temporary pay-box at the Bronze Athletic Ground, Yeoman-street, Rotherhithe (Mr. A. J. Walkley).—Consent.

Width of Way and Height of Buildings.

Finsbury, East.—Erection of a building upon the site of Nos. 15 and 16, Bayer-street, Finsbury (Messrs. Lovegrove & Papworth for Mr. C. Clifford).—Consent.

Line of Frontage, Alteration, and Conversion of Buildings.

Lambeth, North.—Erection of balconies at No. 65 to 79, Stamford-street, Lambeth; projecting architectural features in front of Nos. 73, 75, 77, and 79, Stamford-street; and the formation of openings in the party walls at the basement, ground, first, second, and third floor levels (Mr. G. Bartlett for the Duchy of Cornwall).—Consent.

Omission of Footings.

Westminster.—Omission of footings to the walls and piers of a proposed building on the southern side of Great George-street, Westminster, between Nos. 1 and 8 (Mr. J. Miller for the Institution of Civil Engineers).—Consent.

Cubical Extent.

Westminster.—Additional cubical extent in respect of the proposed erection of an additional (fifth) story at the Army and Navy Stores, Victoria-street, Howick-place, and Francis-street, Westminster (Mr. W. V. Falkiner for the Army and Navy Co-operative Society, Ltd.).—Refused.

Westminster.—Additional cubical extent in respect of the proposed erection of an additional story to Ruskin House, Rochester-row, Westminster (Mr. A. Keen for Mr. W. Morris).—Refused.

Uniting of Buildings.

City of London.—Uniting of No. 70, Old Broad-street, City, with No. 25, Throgmorton-street, by means of an opening at the basement level (Messrs. R. Creese Harrison & Son for Messrs. C. J. Hambro & Son).—Consent.

City of London.—Openings fitted with doors of special construction in lieu of iron doors in the party wall between the basement, ground floor, and first floor of Nos. 38 and 39, Upper Thames-street, City (Check Fire Door Company for Messrs. Siemens Brothers).—Consent.

City of London.—Uniting of Nos. 26, 28, and 30, Duke-street with No. 24, Duke-street, Aldgate, by means of openings at the ground and first floor levels (Levland and Birmingham Rubber Company, Ltd.).—Consent.

Stepney.—Alterations and the erection of an addition to the bottling store at the premises

of Messrs. Mann, Crossman, & Paulin, Ltd., Russell-street, Mile End (Mr. W. Stewart).—Consent.

Whitechapel.—Armoured doors in lieu of iron doors to openings in a party wall between No. 49, Mansell-street and No. 22, Great Alie-street, Whitechapel (Messrs. Mather & Platt, Ltd., for Mr. F. Selby).—Consent.

Cubical Extent and Uniting of Buildings.

Islington, North.—Motor omnibus garage approached from the northern side of Holloway-road, Islington, with two divisions exceeding 250,000 cubic ft. in extent, and the use of roller shutters to openings between the two garages (Messrs. A. L. Gibson & Co.).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERSYCHAN.—Enlargement of school (200 extra places); Mr. T. G. James, Secretary, Education Committee, Monmouthshire County Council, Newport.

Altofts.—School (3,600*l.*); Mr. W. V. Dixon, Secretary, Education Committee, West Riding of Yorks County Council, Wakefield.

Antrim.—Houses; Mr. W. D. R. Taggart, Antrim.

Arklow (County Wicklow).—Six houses (900*l.*); Mr. A. McGowan, builders, South Quay, Arklow.

Arnside.—Enlargement of St. James's Church (3,750*l.*); Messrs. Austin & Paley, architects, 24, Castle-park, Lancaster.

Banbridge.—Nineteen houses; Mr. J. Boyd, builder, Munninabane. Four houses; Mr. T. Callen, builder, Tandragee.

Bandon.—Scheme of labourers' cottages (20,120*l.*); Surveyor, Bandon Urban District Council.

Barking.—Four houses; Architect to the Barking Urban District Council. A plan has been passed for a motor garage, Hurstbourne-gardens, for Messrs. J. W. Garland, sen.

Barlby.—Sewage pumping station (885*l.*); Messrs. Parker & Sharpe, builders, Peaseholme Green, York.

Barnsley.—Alterations to offices, Regent-street, for the Barnsley Permanent Building Society.

Bedford.—Church; Vicar, St. Leonard's, Bedford.

Birtley.—School; Mr. W. Rushworth, Architect, Shire Hall, Durham.

Bishop Auckland.—Alterations to block of old infirmary buildings; Mr. S. Adams, Clerk, Board of Guardians, Bishop Auckland.

Blackrock.—Rebuilding Dundamon Castle; Mr. F. J. McMillen, architect, South Quay, Cork; Messrs. J. Sisk & Son, builders, Cork.

Bolton.—St. Barnabas Church (10,000*l.*); Mr. F. R. Freeman, architect, 13, Bowkers-road, Bolton; Messrs. J. C. & F. Wood, builders (first portion), Darbishire-street, Bolton.

Branley.—Enlargement of school (400 extra places); Mr. W. Packer, Secretary, Education Committee, Leeds Town Council.

Brierley Gap.—Alterations at sanatorium (1,700*l.*); Mr. T. H. Richardson, Surveyor, Hemsworth Rural District Council.

Brimington (near Chesterfield).—Proposed institute (2,000*l.*); Vicar, Parish Church, Brimington.

Brompard.—Wesleyan church; Messrs. Groome & Bettington, architects, King-street, Hereford.

Burhill.—Club-house; Secretary Golf Club, Burhill.

Cardiff.—Block of offices, Queen and Priory streets; Messrs. Habershon, Fawckner, & Co., architects, Mary-street, Cardiff.

Carshalton.—Church, Ruskin-road (3,000*l.*); United Free Methodist Trustees, Carshalton.

Chard.—Enlargement of Corn Exchange, also new municipal offices, etc. (2,000*l.*); Mr. S. G. Rogers, Surveyor, Chard Town Council.

Cottingham.—Proposed parish hall; Mr. J. H. Hanson, Surveyor, Cottingham Urban District Council.

Coventry.—Rectory; Vicar, St. John's Church, Coventry.

Dewsbury.—Extensions, municipal buildings; Mr. H. Dearden, Surveyor, Dewsbury Town Council.

Dunston (Newcastle-on-Tyne).—Dry soap works, etc., adjoining existing works, for the Co-operataive Wholesale Society, Ltd.

Easington.—Miners' homes; Messrs. C. Johnson & Son, Easington.

Eastbourne.—The following plans have been passed:—Additions to Walden Lodge, Carlisle-road, for Mr. C. de Broe; Mr. F. G Cooke, architect. Motor house, "Escalonia," for Mr. Andrew Wise; Mr. C. Crisford, architect. The following plans have been lodged:—Public-house, Havelock-road, for the Star Brewery Company; Mr. F. Cooke, architect. Additions, Royal Marine Hotel, for Col. Cardwell; four houses, Victoria-drive, for Mr. F. G. Collins.

Eccles.—Proposed cinematograph theatre adjoining library, for Mr. H. Langman. A plan has been passed for a lodge at Barton Hall Engine Works, Hardy-street, Peel Green, for Messrs. L. Gardner & Sons, Ltd.

Elworth.—Wesleyan church and school avenue (1,500*l.*); Messrs. Birchall Brothers, builders, Middlewich.

Four Crosses.—School; Messrs. Jones Brothers, builders, Bontnewynydd, Carnarvon.

Fulwood.—Church (3,000*l.*); Wesleyan Trustees, Fulwood.

Garlieston.—Additions to school (800*l.*); Sobie School Board (Wigtownshire).

Great Cressingham.—Proposed housing scheme; Mr. W. V. Twaites, Surveyor, Swaffham Rural District Council.

Halifax.—Church (11,000*l.*); Vicar, St. Paul's Church, King Cross, Halifax.

Halstead.—Enlargement at factories for Messrs. S. Courtauld & Co., silk crape manufacturers.

Heacham.—Enlargement of school (900*l.*); Mr. W. V. Bushell, Secretary, Education Committee, Norfolk County Council, Norwich.

Heburn.—Picture hall, Albert-street; architect, care of the Gem Picture Theatre Company, Jarrow.

Hillgay.—School; Mr. W. V. Bushell, Secretary, Education Committee, Norfolk County Council, Norwich.

Horbury.—Sunday-school; Pastor, Wesleyan Chapel, High-street, Horbury.

Horden Colliery.—St. Mary's Church; Messrs. J. Potts & Son, architects, 57, John-street, Sunderland; Mr. W. Paerson, builder, West Hartlepool.

Houghall.—Extensions to hospital (530*l.*); Mr. F. D. Courson, builder, Glasgow.

Hurst.—Sunday-school; Primitive Methodist Trustees, Hurst.

Jarrow.—Alterations to Gem Picture Theatre, North-street; architect, care of Gem Picture Theatre Company, Jarrow.

Keillor.—Improvements at Keiller House; Mr. John Smith, builder, New Alyth.

King's Lynn.—Alterations to premises, Norfolk-street, for the Working Men's Co-operative Society.

Kingussie.—Three houses (1,700*l.* each), for the Highland Industries Company.

Kirkstall (Leeds).—Church schools; Pastor, Zion United Methodist Church, Kirkstall.

Laceby.—Isolation hospital; Mr. E. Rushton, Engineer, Cleethorpes Urban District Council.

Lakenham.—School; Mr. C. J. Brown, architect, Cathedral Offices, Norwich.

Langwith.—Twenty-six houses, for the Sheepbridge Coal and Iron Company, Bolsover.

Llanystumdwy.—Institute; Mr. T. Rees, architect, Richmond-street, Birkenhead.

Linthwaite.—Dyehouse, Blackrock Mills, for Messrs. Chas. Lockwood & Sons, Ltd.

Lowestoft.—Parish hall; Vicar of Lowestoft.

Messing.—School; Mr. F. Willmott, architect, Duke-street, Chelmsford.

Meath.—Roman Catholic church (6,000*l.*); Messrs. W. H. Bryne & Sons, architects, 20, Suffolk-street, Dublin.

Meopham (Kent).—Pumping station, Walmit's-road; Messrs. W. H. Archer & Son, builders, Gravesend.

Mossley.—Eight houses and shops, Carrbrook, for the Calico Printers' Association.

New Mills and North Darley.—Schools; Mr. G. Widdows, architect, St. Mary's Gate, Derby.

Newcastle.—Dispensary residence for medical officer (1,000*l.*); Architect, care of the Clerk, Rathdrum Board of Guardians.

Newry.—Fifty-two cottages (8,840*l.*); Surveyor, Newry No. 1 Rural District Council

Norwich.—Buildings at electricity works (2,960*l.*); Messrs. G. G. Stowers & Son, builders, 143, Sprowston-road, Norwich.

Parkstone.—Proposed completion of nave of St. Osmund Parish Church (7,000*l.*); the Vicar.

Poole.—Additions to school, Courthill-road (2,668*l.*); Architect, care of Mr. C. Lisby, Secretary, Education Committee, Poole Town Council.

Port Glasgow.—Halls, Victoria-street, for the Kirk Session of the Parish Church.

Pwlheli.—School; Mr. R. L. Jones, architect, Market-street, Carnarvon.

Radcliffe.—Sixty houses off North-street; Mr. W. L. Rothwell, Surveyor, Radcliffe Urban District Council.

Reddish.—Picture palace, Gorton-road, for the Reddish Cinematograph Company.

Richmond.—Alterations to Star and Garter Hotel; Mr. W. A. Lewis, architect, 11-12, Finsbury-square, E.C.

Romford.—Enlargement of Victoria Cottage Hospital (900*l.*); General Committee.

Salford.—The following plans have been passed: Rebuilding lodge, Peel Park (400*l.*), Mr. Matley, architect, Manchester; temperance billiard hall, Eccles New-road, for the Temperance Billiard Halls, Ltd.; reconstruction of saw-mill, Vere-street, Salford; extensions, works, Nona-street, and Sydney-street, Pendleton; extensions, North Manchester Grammar School, Tetlow-lane and Leicester-road, Broughton.

Shawforth.—School; Vicar, St. Michael's Church.

Sheffield.—Proposed children's hospital, junction of Nursery and Johnson streets, for the Trustees of the Sheffield Children's Hospital. The following plans have been passed:—Six houses, Meadow Bank-avenue, for Mr. Musgrave; additions, premises, Milner-road, for Messrs. Brown, Bayley's Steel Works, Ltd.; eight houses, Evandale and Chilton roads, for the Sheffield Land and Mortgage Corporation, Ltd.; shops and store, Eben-street, for the Brightside and Carbrook Co-operative Society, Ltd.; additions and alterations, premises, Pond-street, for the Sheffield Pure Ice and Cold Storage Company, Ltd.; additions, premises, Brightside-lane, for Messrs. T. Firth & Sons, Ltd.; alterations and additions, premises, City-road, for the Duke of Norfolk; additions, shop, Vulcan-road, for Messrs. E. Allen & Co., Ltd.

Sicklinghall.—School; J. Stuart, Architect, County Hall, Wakefield.

Skegness.—Hospital; Mr. F. J. Parkinson, architect, Richmond-terrace, Blackburn.

Slough (Bucks).—Extensions, church (6,000*l.*); Vicar of Slough.

Southend.—Completion of St. John the Baptist's Church (3,675*l.*); Messrs. Dove Bros., builders, Islington, N.

Spen Valley.—Additions to exchange mills for Chas. Hirst & Sons, Ltd.

Spetty.—School; Mr. W. Nash, architect, Angel-street, Neath.

Staveley.—School; Mr. G. Widdows, architect, St. Mary's Gate, Derby.

Staines.—Proposed cottage homes for children; Mr. F. Hutchinson, Clerk, Board of Guardians, Staines.

Stratford-on-Avon.—Cottages (1,000*l.*); Mr. R. Dixon, Surveyor, Stratford-on-Avon Town Council.

Street.—Development of Messrs. C. & J. Clark's Grange Estate; Co-partnership Tenants, Ltd., Bloomsbury, W.C.

Truro.—Conversion of property, Pydar-street, into drill hall for the Cornwall Territorial Association.

Uckfield.—Proposed drill hall near railway station for the Sussex Territorial Association; Capt. A. A. Lloyd, Secretary, Brighton.

Valleyfield (Fifeshire).—190 houses for the Fife Coal Company.

Wakefield.—Garage, Barnsley-road, for the Yorks (West Riding) Electric Tramways Company, Ltd. Recreation-rooms, Wentworth-street and St. John's-avenue, for the St. John's Men's Institute.

Warrington.—Extensions, typhoid ward, at Aiken-street Hospital; Mr. T. Longden, Borough Surveyor, Warrington Town Council. Rebuilding and enlargement of part of Litton's Mill; Mr. Segar Owen, architect, care of Messrs Jas. Fairclough & Sons, Ltd. The following plans have been passed:—Barb warehouse, Dalton Bank, for Messrs. Rylands Bros., Ltd.; thirteen houses, Earl-street, for Mr. Jas. Thornily; additions to works, Carlisle-street, for Messrs. Ashton Brothers & Phillips, Ltd.

Watford.—St. Michael's Church; Mr. A. G. Bond, architect, Gower-street, W.C.

West Hill.—Parish hall; Rev. T. A. Low, Ottery.

Workington.—Alterations and additions to technical school (1,000*l.*); Mr. C. C. Hodgson, Secretary, Education Committee, Cumberland County Council, Carlisle.

Worksop.—Alterations and additions to infirmary, Kilton Hill (1,500*l.*); Mr. J. S. Whall, Clerk, Board of Guardians, Worksop.

Wood Green.—Proposed central fire station, corner of High-road and Earlham-grove; Mr. C. H. Croxford, Surveyor, Wood Green Urban District Council. The following plans have been passed:—Extensions, church, Westbury-avenue, for Messrs. Humphrey's, Ltd.; construction of basement to No. 10, Cheapside, High-road, Messrs. Higgins & Thomerson for Messrs. Edmonds, Denham, & Goyder, Ltd.

Wye.—Fire station bridge; Surveyor to the Wye Council.

Wyken Colliery and Walsgrave.—Schools; Mr. J. Willmott, architect, 6, Waterloo-street, Birmingham.

Yarmouth.—Proposed baths, Trafalgar-square (5,000*l.*); Mr. J. W. Cockrill, Surveyor, Yarmouth Town Council.

York.—Alterations and improvements at infirmary (14,295*l.*); G. Sykes, Clerk, York Board of Guardians.

Youghal.—Improvement scheme under Labourers' Act; Surveyor, Youghal No. 1 Rural District Council

* See also our list of Competitions, Contracts, etc., on another page

METROPOLITAN ASYLUMS BOARD.

AT the fortnightly sitting of this Board on Saturday the following matters were dealt with:—

Western Hospital.—A letter was received from the Local Government Board authorising the erection of a steward's house at the above hospital at a cost of 748*l.*

Darenth Asylum.—A scheme was submitted by the Asylums Committee, which had been prepared by the Assistant Engineer, for the construction of three separate covered settling tanks, each of 100,000 gallons capacity, for the purpose of softening the water used in the Asylum. The cost is estimated at 2,000*l.*, and it was decided to ask the Local Government Board to authorise the expenditure.

Leavesden Asylum.—It was agreed to ask the sanction of the Local Government Board to the provision of bridges between the different blocks of Leavesden Asylum, at an estimated cost of 7,000*l.*

SANITARY PLUMBING.

A MEETING was held on Wednesday evening last week at the London County Council Schools, Ferndale-road, Brixton, to inaugurate the winter course of special lectures to be given on the subject of sanitary plumbing. Mr. W. D. Caröe, M.A., F.S.A., Past-Master of the Worshipful Company of Plumbers, presided.

The Principal, Mr. H. W. Richards, who welcomed the audience on behalf of the Chairman and Committee of the School, expressed appreciation of the work of the Council for the National Registration of Plumbers in organising the meeting and their interest in the work of the School.

The Chairman explained that he presided in the unavoidable absence of the Lord Mayor, who wrote saying that changes in domestic habits and the great increase in the number of sanitary appliances of all kinds add greatly to the complexity of plumbers' work in and about the houses of the people, and the London County Council were entitled to the gratitude of the community for the support they are giving to the classes of instruction for plumbers. The classes were instructed by practical teachers, well versed in the technicalities of the trade and well abreast of modern sanitary requirements, and the plumbers of London were thus brought to regard the classes with confidence as affording fit training for the apprentices and young men entering the plumbing trade. He was glad to learn that the Managing Committee, which acts with the Plumbers' Company for the National Registration of Plumbers, heartily appreciates the working of the classes, and he should therefore be pleased to move the Court of the Company to consider offering some award to successful students attending the course of instruction given at the School.

Mr. Fretwell, R.P., teacher of sanitary plumbing, delivered a lecture on domestic water supply. He described the various forms of boilers and methods of circulating hot water by the cylinder, tank, and auxiliary systems. The lecture was illustrated by numerous diagrams, and particulars were given of the relative costs of heating water by coal and coke fires and electricity.

A vote of thanks to the Chairman was moved by Mr. J. Wright Clarke, seconded by Mr. W. Beecroft, supported by Mr. J. Beeston, and carried with acclamation.

At the conclusion of the lecture specimens of the standardisation mark applicable to plumbers' work under Regulations of the Board of Trade were shown on pipes of lead, cast-iron, wrought-iron, and copper, and the Clerk of the Plumbers' Company, Mr. W. R. E. Coles, briefly explained the system of marking.

TURIN EXHIBITION AWARDS.

THE following are some awards accorded to British exhibitors at Turin Exhibition, 1911:—

Messrs. W. F. Stanley & Co., Ltd., grand prix, for measuring, drawing, etc., chronological instruments; a grand prix for physical, optical, surveying, and astronomical instruments, and a gold medal for meteorological instruments.

Messrs. Chance Brothers & Co., Ltd., grand prix (Classes 9, 10, and 11, physical, optical, surveying, and astronomical instruments).

The Pulsometer Engineering Company, Ltd., a gold medal (Classes 9, 10, and 11).

The Bostwick Gate and Shutter Company, Ltd., gold medal, Class 71 (*i.e.*, materials and appliances for erecting, decorating, and finishing buildings).

In Classes 19 and 20 (steam plant, heat, and other engines, transmitting, lubricating, regulating, and indicating apparatus) the awards include the following:—

Grands Prix: Messrs. Babcock & Wilcox; Messrs. E. Green & Son, Ltd.; Messrs. Ruston, Proctor, & Co., Ltd. (also awarded a diploma of merit for important exhibit and a gold medal in Classes 21 and 22); Underfeed Stoker Company, Ltd.

Silver Medal: Messrs. John Ruscoe & Co., Ltd.

In Classes 21 and 22 (lifting, hydraulic, and air machinery, fire and safety appliances and submarine apparatus) some of the awards were:—

Hors Concours: Worthington Pump Company, Ltd. (London).

Grand Prix: Messrs. Merryweather & Sons.

Diploma of Honour: The British Vacuum Cleaner Company, Ltd.

Gold Medal: Messrs. Ruston, Proctor, & Co., Ltd.

In Classes 35, 36, and 37 (building materials, methods of construction, machines, appliances, models, plans, and drawings) the awards include the following, all Grands Prix: Hadfield's Steel Foundry Company, Ltd.; Ingersoll-Rand Company, Ltd.; Messrs. Marshall, Sons, & Co., Ltd.; Pilkington's Tile and Pottery Company, Ltd. (who also receive a grand prix in Class 71, *i.e.*, materials and appliances for erecting, decorating, and finishing buildings, and a grand prix in Classes 72, 73, and 74, *i.e.*, furnishing, upholsterers' work, decorative bronzes, art candelabra, glass, and china); Messrs. Ruston, Proctor, & Co., Ltd.

In Classes 72, 73, and 74 (furnishing, upholsterers' work, decorative bronzes, art candelabra, glass, and china) we notice the following:—

Hors Concours: Messrs. Morris & Co., Ltd.; Messrs. Thomas Webb & Sons, Ltd.

Grands Prix: Messrs. Doulton & Co., Ltd.; Pilkington's Tile and Pottery Company, Ltd.

In Class 75 (heating appliances, cooking ranges, and articles for domestic use), Messrs. Bolding & Sons, Ltd., a silver medal.

The Gas Light and Coke Company, a grand prix, in Class 115 (destructive distillation).

Roneo, Ltd., a grand prix, Class 150 (appliances for the graphic arts).

The following are some awards in Class 152 (publishing), *i.e.*:—

Hors Concours: Messrs. Constable & Co., Ltd.

Grands Prix: Messrs. G. Bell & Sons, Ltd.; John Murray; Messrs. Smith, Elder, & Co.

Diploma of Honour: Messrs. Crosby Lockwood & Son.

LEGAL COLUMN.

Deposits on Contracts for Sale.

An interesting point came before a Judge of the Chancery Division for decision in the case of Hall *v.* Burnell. An agreement had been entered into for the purchase of certain freehold property, and, according to the agreement, a deposit had to be paid to the vendor's solicitors as stakeholders. The title was accepted and a conveyance approved; but the purchaser failed to complete. Specific performance was decreed, and the sum due to the vendor was certified as 2,400*l.*—that was the purchase price less 50*l.* deposited. The purchaser never completed, and the vendor then applied to the Court to have the agreement of sale rescinded and the deposit forfeited to him. The contract contained no provision as to what was to be done with the deposit in such circumstances, and the Court had to consider what was the implied obligation. The purchaser did not appear to argue the point on this motion. There are two somewhat contradictory decisions on this point, one delivered in 1884, the other in 1904; but the Court preferred to follow the earlier decision, that a deposit "is not merely a part payment, but that it is also an earnest to bind the bargain so entered into and creates by the fear of its forfeiture a motive in the payer to perform the rest of his contract." The contract was, therefore, rescinded, the vendor retaining the deposit. It may be noted that litigation would be saved if contracting parties were more careful to express in their contracts their intentions in the various eventualities which can easily be foreseen. To leave any term to be implied is to risk litigation, as recourse to the Courts is then often unavoidable.

Oil on Roads.

A recent police court decision should be brought to the attention of the public. A steam car company was summoned under the by-laws of the Camberwell Borough Council, made under sect. 16 of the Public Health (London) Act, 1891, in respect of oil waste deposited on the roads. The by-laws provide that a "person shall not throw, cast, or lay any dust, ashes, rubbish . . . . or filth, or other like matter or thing" in or upon any part of a street. It was contended that the oil did not come within the description as "filth," but the magistrate convicted. The ordinary motor vehicle is such an offender in this respect that the decision should be made widely known. The oil, added to the mud, is a serious nuisance to users of our thoroughfares, and as this source of pollution is wholly unnecessary, and can easily be prevented, the offenders should be rigorously prosecuted.

LAW REPORTS.

Minter *v.* Waldstein.

MR. MUIR MACKENZIE, the Official Referee, delivered his considered judgment in this case on Friday, the 20th inst., it being an action by the plaintiff, Mr. Frederick George Minter, a builder and contractor, living in Wimbledon, against Mr. Charles Waldstein, to recover certain payments the plaintiff alleged to be due to him under a contract entered into on February 3, 1910, in respect of extensive alterations and additions to Newton Hall, a large country mansion belonging to the defendant, who was a Professor of Fine Art at the University of Cambridge. The plaintiff claimed that there was a sum exceeding 3,000*l.* due to him on two certificates, which Mr. F. W. Foster, the architect under the contract, had given. The price payable under the contract was 12,975*l.*, and the sums of money paid to and claimed by the plaintiff amounted to about 21,000*l.* in all, of which the defendant had already paid about 17,500*l.*

The defendant disputed his liability for the money claimed, upon the ground that Mr. Foster's certificates were invalid, having been given after his authority had been revoked, and the defendant counterclaimed for damages laid at 10,000*l.* upon the ground that the plaintiff had in fact, and without authority, used materials not in accordance with the specification and contract, and that the workmanship was inferior.

The Official Referee, in the course of his judgment, said it would be necessary for him to tax the patience of those who had attended to hear his decision, inasmuch as he was unable to deal with the several matters in controversy without going into the evidence at considerable length.

Having stated the nature of the action and of the defendant's counterclaim, he said the plaintiff claimed 2,750*l.*, the amount of a certificate which was granted by Mr. Foster last January, and by which he certified that that sum was due to the plaintiff for work done and material supplied. Mr. Foster subsequently granted the plaintiff another certificate for 533*l.* for extras, and this latter sum the plaintiff claimed in reply to the defendant's counterclaim. The defendant disputed his liability for the money claimed on the ground that Mr. Foster's certificates were invalid, having been given after his authority had been revoked, and, further, that in important particulars the plaintiff had not fulfilled his contract. The damages which the defendant claimed under his counterclaim exceeded the amount of the plaintiff's claim. The trial before him lasted thirty-eight days, and a number of witnesses gave evidence on both sides. It appeared that the defendant employed Mr. Foster as the architect for the alteration and enlargement of Newton Hall towards the close of 1909. Mr. Foster prepared drawings, which were discussed and revised by the defendant, who was anxious to have the work pushed on as soon as possible. Mr. Stanborough, a quantity surveyor, got out the quantities, which were priced out by the builder, and the plaintiff's price came out at 12,900*l.* odd. A specification was also prepared. The building contract, which was signed, contained the usual clauses and conditions for the carrying out of the work.

The learned Official Referee then referred to the material clauses of the contract, which was an ordinary R.I.B.A. contract. The work was commenced at once, and the date when the work had to be finished was August 1, 1910. A Mr. Green was to be appointed clerk of the works. The work in connexion with the alterations included a proposal for a system of drainage which had to be made in accordance with certain plans. He did not think that any plans as to the drainage were made by the architect. In addition to the work on the house, the plaintiff executed some considerable additional works at Newton Hall.

The learned Referee referred to the items in connexion with the work on the gardener's and bailiff's cottages, the alterations to the stables, the alteration to the drainage scheme, the laying down of hard core for a new carriage drive, a new entrance lodge, fixing and completing a bell turret in the roof, and

some small items, such as a lightning conductor being erected. He said the original contract price was being exceeded by about 1,800*l.* in connexion with the additional work which was ordered. In September the work was completed, and the defendant moved into the house and made serious complaints about the character of the work. Early in January, 1911, Mr. Stanborough's account was completed and forwarded to the defendant. According to the account delivered, the defendant's liability was about 21,000*l.*, and at that date the defendant had on the certificates of the architect paid the plaintiff about 16,000*l.* The architect gave the builder a further certificate for 1,500*l.*, and he wrote to the builder that the defendant was very dissatisfied with the work. Plaintiff afterwards claimed a further sum of 3,000*l.*, but the defendant declined to make any further payment in connexion with the matter.

The Official Referee then read at considerable length the correspondence in the case detailing the granting by Mr. Foster of the certificate for 2,750*l.*, which was sued upon, and also the certificate for 533*l.*, which the plaintiff also sued for in reply to the defendant's counterclaim, the termination by the defendant of Mr. Foster's appointment, and the appointment by the defendant of Mr. John Murray as his architect. The defence in the action, the learned Referee, continuing, said, was delivered in March, 1911.

There was first the plea of a denial of indebtedness which, under the rules and the Judicature Act, might be disregarded, and defendant also pleaded that the architect had no right to give the certificates that he had given, and he based his counterclaim upon the fact that numerous variations had been made from the contract without his authority; further, that the work done and materials supplied under the contract for extra work were unsuitable and not in accordance with the contract, and also that the prices charged by the plaintiff for extra work were excessive. Those were the really effective matters of the counterclaim, under which the defendant claimed damages for a sum largely exceeding the plaintiff's claim. The trial commenced on July 5, 1911, and was continued without interruption until August 19. The plaintiff, by his Counsel, did not content himself by alone relying upon the architect's certificates, but took upon himself the task of meeting and disproving the charges made by the defendant. The general effect of the evidence of the plaintiff and of his expert witnesses was that as far as the plaintiff was concerned he had generally fulfilled the conditions of the contract; that he had by the contract to follow the directions of the architect; that some of the alterations and deviations were due to the defendant's own fault, and that the work was done under the direction of the architect or the defendant and his wife. It was also said in effect by the plaintiff and his witnesses that if the matter had not been taken out of the plaintiff's and Mr. Foster's hands matters could have been put right for a very small expense. Defendant's witnesses gave evidence as to the alleged bad workmanship, bad timber, bad joinery work, the improper spacing of the joists, and other matters referred to in the counterclaim, including the fissures and cracks which had appeared in the ceilings and partitions. He (the Official Referee), before addressing himself to the evidence, had first of all to consider the question of principle and the manner in which he had to apply himself to deal with the contract. He thought the architect's certificate created *prima facie* a debt due from the defendant to the builder. The contract provided that the builder was to be entitled to payment of the sum mentioned in the certificate within a specified period. The main ground on which the defendant denied his liability under the certificates for the sums of 2,750*l.* and 533*l.* was that the architect had no authority to give them, his authority having been revoked before they were given. Under the contract the architect had power to grant certificates. The question was whether the certificates for payment by Mr. Foster could in the circumstances stand, and whether the defendant had power to effectively discharge Mr. Foster's authority to grant the certificates for work done. Upon this point reliance was placed upon Clause 3 of the contract, which provided that in the event of Mr. Foster's death, or his ceasing to be the architect for the purpose of the contract, such other person was to be nominated for that purpose by the employer. That clause, in his opinion, did not give the defendant power to terminate Mr. Foster's authority to grant certificates for work done, and, even if he had the power, he further found that the letters which the defendant relied upon on this point did not operate to terminate Mr. Foster's authority. He thought those letters, so far from terminating the architect's position, recognised that it was continued. Mr. Foster's power was to issue certificates for work done under the contract. He therefore decided that the defendant's plea of a denial of liability upon that ground failed, and that the certificates which Mr. Foster had granted to the plaintiff for 2,750*l.* and 533*l.* were valid certificates. The next question he had to consider was what sum ought to be deducted from those sums in consequence of the charges which the defendant raised by his counterclaim, and to what extent the plaintiff had committed the breaches of contract alleged as to workmanship and materials, and what sum should be allowed the defendant as damages. On this question much contradictory evidence was given as to whether the plaintiff did commit breaches of the contract and conditions. Having referred to the specification and a great deal of the evidence, the learned Referee found that a great portion of the timber which had been used in the building was not of the quality specified, and he was not satisfied that the timber as specified could not be got, and the result was that some of the conditions of the specification were completely ignored in that regard. Next he found that the dimensions of the timber used were not as specified, and that what had taken place in that respect must be considered as deviations from what was specified. He further found that the spacing of the floor joists was in places 18 in. and in others 20 in. apart, which would result, it was said, in great weakening of the floors. He found that the spacing was not in accordance with the conditions specified. He had to decide whether such deviation and defect in workmanship were breaches of contract. It appeared that the architect saw and allowed the wider spacing of the joists. As far as the clerk of the works was concerned, he decided that he had no power to authorise the contractor to disregard Clause 7 of the contract.

This clause ran:—"All materials and workmanship shall be of the respective kinds described in the specification, and the contractor shall, upon the request of the architect, furnish him with vouchers to prove that the materials are such as are specified."

It was said with reference to this question that the architect had power, under Clause 12 of the contract, which provided that "the contractor should, when authorised by the architect or as provided by Clause 5, vary by way of extra or omission from the drawings or specification," to order or sanction variation. But such a power did not authorise him to depart from the terms of the contract so as to prejudice the strength and stability of the building. He arrived at the conclusion that the acquiescence of the architect as to the wider spacing of the joists, and as to the quality of the timber, did not absolve the plaintiff from his contract to carry out the specification on those heads. Upon those heads, therefore, he found that the plaintiff did commit breaches of the contract.

The learned Referee then referred to the charges made by the defendant with regard to the alleged defects in the workmanship and the quality of the timber supplied to the roofs, and he found that the timber in both roofs was inferior to that which the plaintiff contracted to supply, and that the spacing of the rafters was wider than that specified, and that the rafters were improperly butted, and that some of the rafters provided were too short. He found that other allegations that the defendant had made as regards to the roof were not proved. With regard to the joinery work, he found that the defendant had not discharged the onus which was upon him of proving that the quality of the wood was not as contracted for; but with regard to the workmanship, in that respect he thought there were some defects. He thought, however, there was no doubt that the great heat which had been experienced this summer was very trying to all new joinery work. Having dealt with the items raised as to the slab partitions and the work done in connexion with the coal house, pump house, gardener's cottage, bailiff's cottage, and dairy, etc., the Referee said that on his visit to Newton Hall in July last he found that the condition of the house was substantially as described by the defendant's witnesses. The weakness of the floors had produced numerous fissures and cracks, some of which were serious, and he found that it was necessary for the stability of the house that remedies of the kind proposed by some of the defendant's witnesses should be adopted. He had come to the conclusion that the remedies proposed in evidence for the plaintiff were insufficient to obviate the defects; but, on the other hand, he was of opinion that the suggestions advanced on behalf of the defendant covered a good deal more than the plaintiff was responsible for.

The Referee, having dealt and examined in detail the sums involved in both claim and counterclaim, and subject to a revision of the figures, if necessary, before finally entering judgment, entered judgment as follows:—

On the claim and defence for the plaintiff for 2,750*l.* On the counterclaim for the defendant for 2,116*l.* 14*s.* On the plaintiff's counterclaim to the defendant's counterclaim for the plaintiff for 533*l.* Execution on these judgments to be limited to execution for the plaintiff for the balance in his favour of 1,166*l.* 5*s.* 9*d.* The costs of the plaintiff's claim to be the plaintiff's. The defendant to be entitled to the costs of the counterclaim. As regards the issues on which either party had failed, he was not to have those costs.

Upon the application of Mr. Clavell Salter, K.C., the learned Official Referee granted the defendant a stay of execution upon terms with a view to an appeal from his decision.

HIGH COURT OF JUSTICE, CHANCERY DIVISION (Mr. Justice EVE).

Ancient Lights Case:

Schworer *v.* Bethnal Green Borough Council.

THE hearing of the case of Schworer *v.* Bethnal Green Borough Council, which was reported in our last issue, was continued on October 18.

For the defendants Mr. W. H. Eve, F.S.I., 10, Union-court, Broad-street, E.C., gave evidence and proved the plans and sections he had prepared on their behalf. He had visited the plaintiff's premises and considered the ground-floor room to be a well-lighted room. He could read small print easily at a distance of ten feet from the window. Referring to the sections he had prepared, Mr. Eve said that he had taken a line through the centre of the ground-floor windows and prolonged it at right angles to the defendants' premises, and this gave an angle of 20 deg. of obstruction of light. Taking a line from the same place to the eaves of the Town Hall, the angle of obstruction was 43 deg. He did not think, however, that the sections were the true tests of the quantity of light taken away. There was a large volume of light over the yard of No. 20 coming to the windows of the basement and ground floor. The Town Hall caused an obstruction of lateral light, if anything, and did not interfere with the direct light at all. The total amount of light coming to the windows of the plaintiff at the horizontal angle was, before the Town Hall was put up, 140 deg. That was quite exceptional for such a district. He had considered very carefully the amount of light taken away by the defendants' building, and was strongly of opinion that it was not substantially interfered with, and that the ground-floor and basement rooms could still be enjoyed in a way that any reasonable person would expect in such a neighbourhood. He did not think any real injury had been done to either owner or tenant.

In answer to Mr. Jessel, K.C., Mr. Eve said that some reduction had possibly been made in the value of the house. He admitted that there was a diminution of light, but he did not think the tenant would have to light up any earlier.

Mr. Jessel suggested that in making his plans witness had taken his heights from the general ground level, and had not allowed for the fact that there was a drop of nearly 2 ft. underneath the windows in question. Mr. Eve pointed out that from the way his plan was prepared the depth below the window did not affect the heights.

Mr. Percy Robinson, F.R.I.B.A., of Leeds and John-street, Adelphi, was also called. He and his partner, Mr. Jones, were the architects of the new Town Hall at Bethnal Green. The copings of the wall adjoining No. 20, Patriot-square were on in December last. He first inspected plaintiff's premises in 1910. He agreed generally with the evidence given by Mr. Eve. He thought that when the curtains of the ground-floor windows were drawn aside there was ample light for all ordinary purposes.

There was very little diminution of light. An angle of 45 deg. from the window cut off very little sky area, the only obstruction being the chimney of the Town Hall.

The witness, cross-examined by Mr. Jessel, said he had practised in London for the last three years. When he visited the plaintiff's premises with Mr. Eve they were able to write down the particulars of the measurements then taken without the slightest difficulty in any part of the room on the ground floor. He considered the amount of light taken away to be a negligible quantity.

Mr. Ernest Edward Finch, A.M.Inst.C.E., from 1903 to 1910 Borough Engineer of Bethnal Green, and now Assistant Engineer to the Corporation of London, described the plaintiff's property as a very old dwelling-house, unsuited for business purposes. In December, 1909, when he visited the premises, the eastern wall of the Town Hall was at its full height. He went into the ground-floor room. There was no sunshine, but he could see quite well

to take notes and read them, although they were written in pencil. The room, in his opinion, was very well lighted. He agreed with the evidence given by Mr. Eve and Mr. Robinson.

Cross-examined, Mr. Finch said that the first time he visited the premises was in company with Mr. Schworer, and on that occasion the tenant complained that the new Town Hall had made the rooms darker.

Mr. Jessel: If more gas has to be used, would that, in your opinion, damage the property from a selling or letting point of view?—I do not think it would.

After Counsel had addressed the Court,

Mr. Justice Eve, in giving judgment, said that the plaintiff alleged that the erection of the Town Hall had interfered with the light coming to the basement and three floors of his premises to an extent to cause considerable inconvenience to the tenants and to prevent them carrying on their businesses as beneficially as before. When the case came on, counsel for the plaintiff abandoned any claim for damages in respect of the two upper floors, and also intimated that the damage to the basement might turn out not to be very serious. As the case developed it was seen that the suggestion was well founded, and the claim was really only for damages for interference in the light coming to the ground-floor windows. The evidence had been directed to the condition of that room antecedent to and subsequent to the erection of the Town Hall. He was satisfied that antecedent to the erection of the Town Hall the light which came to the plaintiff's ground-floor room was exceptionally good. The light for that room was at its very best when the plaintiff purchased the house, because in the summer of 1908 the whole of the obstructions which were not of any great importance, and which had existed on the land occupied by 14 and 16, Patriot-square, had been removed, and the land was cleared and ready for the erection of the Town Hall. On the evidence he held that by the end of 1909 the obstruction caused by the Town Hall was complete. It undoubtedly diminished the light to the plaintiff's premises to an appreciable extent on the south side.

The test to be applied was that laid down by Lord Davey—"Is the light which is left sufficient to answer the ordinary requirements of inhabitancy for the ordinary purposes of mankind?" Counsel for the plaintiff said it did not, because, in fact, the work carried on in the ground-floor room with ordinary light could not now be carried on for the same length of time day by day. He did not think that had been established as a fact, although he thought the evidence on behalf of the plaintiff had been given quite honestly. He did not wish to decide the case on that footing. If the mere diminution of light did not give the plaintiff a cause of action, the results which flowed from that diminution did not necessarily give a cause of action. One was not bound to measure the immateriality of the interference by the extent to which it involved the substitution of artificial light. On the evidence he did not think there could be any reasonable doubt as to the present condition of the room in question. Not only from the evidence of the defendants' witnesses, but from the very fair evidence given by Mr. Rix, the plaintiff's expert, the room must be regarded as a fairly well-lighted room. His Lordship said he thought it had been established that the room was in fact a well-lighted room. Whatever might be the results of what the defendants had done, they had not been such as to bring the present condition of the room to a standard below that at which they ought to have left it. Although he sympathised very much with the occupiers, he did not think any case had been made out on which the plaintiff was entitled to succeed, and the action would, therefore, be dismissed with costs.

LONDON COUNCILS.

Barnet.—Plans were submitted by the Borough Surveyor at the last meeting of the Urban District Council for twenty-two cottages in Totteridge-lane, when it was decided that application should be made to the Local Government Board for sanction to a loan of 4,600*l.* for the erection thereof. The Board are to be asked at the same time to dispense with the usual public inquiry, as the application now made was only an extension of the Council's scheme, for which a loan had already been sanctioned and obtained. Sanction has been received from the Local Government Board to the borrowing of 3,050*l.* for repaving the High-street.

Bushey.—At the last meeting of the Urban District Council a recommendation from the Surveyor that a town planning scheme should be adopted was passed, and a Town Planning Committee was appointed. It was further decided to approach the Local Government Board with a view to getting them to receive a deputation on the subject. The following plans have been passed:—Mr. G. Jaggard, five houses, King George's-avenue; Miss Lucy Kemp-Welsh, additions to workmen's club, Rudolph-road.

Camberwell.—The Royal Institute of British Architects has sent the following circular letter to all the London Borough Councils with regard to street name-plates:—"The Council of the Royal Institute of British Architects wishes to call the attention of the Borough Councils of London to the importance, both in an æsthetic sense and as a matter of public convenience, of taking steps towards a complete revision of name-plates for the corners of London streets, with well-designed lettering, preferably of a uniform style throughout London. As to the matter of public convenience, the Royal Institute wishes to point out that while in Paris every street corner bears the name of the street, in London there are hundreds of corners where no name at all is to be found, so that it is often difficult to discover the name of a street without walking some distance along it, the fixing of name-plates having never been carried out on any complete and comprehensive system. In regard to the æsthetic question, it is desirable that a good type of lettering should be adopted on two scales, the larger or smaller scale to be adopted according to the width and importance of the street and the architectural scale of the buildings flanking it. The Royal Institute is not advocating the employment of any name-tablet more costly than those now in use; a good type of lettering, once designed, costs no more to execute than an inferior one. It has long been the wish of the Council of the Royal Institute to see this matter of complete labelling of the London streets taken in hand and carried out in a systematic manner, so as to remove from our capital a reproach which it certainly lies under in this respect in comparison with Paris, and they hope that the Borough Councils would see their way to act together in securing this much-needed improvement. One of the faults in the present condition of things is that not only are name-tablets wanting in many situations where they ought to be found, but that those which exist are in so many different forms and patterns. It is suggested that if the Borough Councils were willing to consult together on the subject and to take up the matter conjointly, and agree upon a pattern of lettering, a uniform system for the whole of London could be secured, to the great advantage of the appearance of our streets, as well as to the general convenience of the public. We may add, the Royal Institute is always ready to place its services in public matters of this kind at the service of the Borough authority."

Croydon.—The Rural District Council have accepted the tender of Mr. Isaac Wilson, Gorringe Park-avenue, Mitcham, at 325*l.*, for making up Oakwood-avenue, Mitcham.

East Ham.—Plans were submitted by the Engineer for a convenience and lock-up shop at the corner of Station-road and Romford-road, and application is to be made to the Local Government Board to borrow the necessary money. A plan has been received from Messrs. Mark Liell & Sons, showing a suggested building line for the development of land at the south-east corner of Bendish-road and High-street North, and asking if the Council will allow them to project beyond the building line of Bendish-road, thus enabling them to build right up to the back of the footpath in Bendish-road for a distance of 104 ft. west of the High-street frontage. The Council are to allow them to do this provided they surrender the whole of the forecourt to the building line of the shops on the north and south sides in High-street North, and sufficient land for rounding off the corner of Bendish-road and High-street North. Plans submitted by the Engineer have been approved for the completion of the sewering of Sussex-road at an estimated cost of 84*l.* The Engineer has been instructed to submit plans and estimates for the erection of slipper and vapour baths in connexion with the new swimming-baths. Plans have been passed for Mr. T. Watson for six houses in Lichfield-road. Plans have been lodged by Mr. G. Clark for ten houses in Wallend-road.

Greenwich.—Tenders are to be invited for forming and paving a part of Bramshot-avenue.

Hampstead.—A portion of the footway in Finchley-road is to be tar-paved. In order to meet the requirements of the London County Council, extra works and variations are to be carried out at the new town hall buildings, at an estimated cost of 192*l.* No objection is to be raised to the building of an institute on the south side of Perrin's-court for the Vicar of the Hampstead Parish Church. The architect is Mr. A. Keen, of Raymond-buildings, Gray's Inn, W.C.

Hemel Hempstead.—The Education Committee have accepted the tender of Messrs. Jayes & Son, Leicester, at 138*l.*, for heating and lighting work at the new school at Two Waters.

Hendon.—At a recent meeting of the King Edward Memorial Cottage Hospital Committee at the Council Offices, Hendon, a modified scheme was adopted for the erection of a memorial cottage hospital at an estimated cost of 1,500*l.* The address of the architect is care of Mr. W. J. King, "Lyndhurst," Rosecroft-avenue, Hampstead, N.W.

Islington.—A new 9-in. pipe sewer, surrounded with Portland cement concrete, is to be substituted for the old brick sewer in Thornhill-crescent, at an estimated cost of 180*l.*

Lewisham.—Part of Woolstone-road is to be repaved with artificial stone at an estimated cost of 113*l.* In connexion with the proposed London County Council tramway from Catford to Forest Hill, the Council have decided to pave the carriageways and margins of the roads through which the tramway will run with wood-blocks, at the following estimated costs:—Rushey Green to Brockley Rise, 5,770*l.*; Park-road to London-road, 1,720*l.* The County Council are to be requested to pave the whole of the tramway track under their control with the same material, with the exception of the portion on Catford Bridge, the whole of which is to be paved with granite setts. The following plans have been passed:—Mr. A. J. Roddis, six houses, Rushford-road; Messrs. Jarman & Co., additions to Obelisk House, High-street.

Surbiton.—At the last meeting of the District Council the following resolution by Mr. F. B. Ray was carried:—"That the Council instruct the Fire Brigade Committee to retain an architect for the purpose of preparing plans for the erection of a fire-station on Surbiton-hill, adjoining the Council offices."

West Ham.—Plans have been passed for Mr. W. Jacques for an addition at the Council school in Grange-road, Plaistow, and for alterations and additions to the Council school, Prince Regent's-lane, Custom House.

Westminster.—The City Council have decided to enter into an agreement with H.M. Office of Woods for the purchase of sufficient land to widen Argyll-place, between Regent-street and Kingly-street, to 60 ft. The necessary paving, etc., works, exclusive of alterations to mains, etc., is put at 593*l.* A portion of the area at No. 1, Pimlico-road is to be covered in, and the pavement set back about 5 ft., at a cost not exceeding 100*l.*

Willesden.—Plans submitted by the Engineer for the following have been approved:—Convenience at Church End, estimated cost, 399*l.*; underground convenience at Canterbury-road, South Kilburn, 1,621*l.*; construction of new road from Harlesden-road to High-road, Willesden, involving the widening of Pound-lane, 4,920*l.* The Engineer has been instructed to report as to the cost of erecting a public convenience at the apex of Kensal Rise plantation. Application is to be made to the Local Government Board for authority to prepare a town-planning scheme. The wood-paving in Chamberlayne-road is to be extended from Kilburn-lane to Bannister-road, and from the motor omnibus terminus to the northern flank of Kensal Rise Wesleyan Church. The following plans have been passed:—Messrs. William Moss & Sons for the Dairy Supply Company, factory, Cumberland-avenue, Park Royal; Mr. W. S. Dakers for Messrs. Callow & Wright, four houses, Staverton-road, Brondesbury; Messrs. Nowell Parr & Kates for the Royal Brewery, additions and alterations to the Crown beer-house, High-road, Willesden Green; Mr. John Cash, alterations to the Willesden Radical Club.

Woolwich.—The Works Committee report having received seven tenders for the erection of the combined convenience and shelter at the Eltham tramway terminus. The prices of these tenders ranged from 280*l.* to 385*l.*, and, after consideration, they decided not to accept any tender, but to carry out the work by direct labour at an approximate cost of 310*l.* The following plans have been passed:—Messrs. J. James & Co., per Mr. J. R. Viney, 89, Chancery-lane, W.C., additions to warehouse at shirt factory, Wood-street; the Trustees, per Messrs. J. Garrett & Son, 83, Balham-hill, S.W., baptist chapel and ventries, corner of West Mount and Glenure roads, Eltham. The London County Council have written to the Borough Council enclosing a plan submitted by Mr. R. M. Allen, 83 and 85, Powis-street, for the erection of a cinematograph theatre in Beresford-square, and asking for the Council's observations thereon. The Committee found no objection thereto other than the fact that the new building would be within 20 ft. of the centre of Beresford-street, which was contrary to the provisions of sect. 13 of the London Building Act, and they have decided to call the attention of the County Council thereto.

TRADE CATALOGUES.

We have received from Messrs. S. W. Francis & Co., of Gray's Inn-road, London, E.C., their latest catalogue of wood, iron, and steel revolving shutters, spring shop sun-blinds, and shop-front works in brass, bronze, copper, and gun-metal. Among the firm's recently-executed work are shutters for the London County and Westminster Bank, Parr's Bank, the Hippodrome, Leicester-square, and the Law Courts.

We have received from Messrs. Arthur L. Gibson & Co., of Radnor Works, Strawberry Vale, Twickenham, a booklet dealing with Cabot's sheathing and deafening quilt. "Quilt" is an insulator, constructed to give the most perfect results in the non-conduction of both heat and sound, and may be used for external walls, ceilings, and partitions. It consists of a felted matting of eel-grass, held in place between two layers of tough manila paper by quilting. Eel-grass is indestructible by decay, and will not burn, so that "Quilt" is practically fireproof. A series of tests made for the sound-deadening of the dormitories of the New England Conservatory of Music, Boston, United States, proved that the insulating properties of "Quilt" were superior to the other methods of sound-proofing experimented on. Other uses to which the material has been put with admirable results are as a sheathing for framed houses, where it may be placed under the shingles or slates as a roof-lining and as an insulator for cold-storage boxes. We note that the living-huts and observatory built for Capt. Scott's present Antarctic Expedition by Messrs. Boulton & Paul, of Norwich, have been lined throughout with two layers of double-ply "Quilt."

FOREIGN AND COLONIAL.

Industrial Expansion of Canada.

An examination of the conditions underlying the industrial expansion in Canada and of the promise of the future has convinced Mr. J. Norton Griffiths, M.P. for Wednesbury, that the moment has arrived for English manufacturers to take practical steps towards establishing independent branches of their works in Canada, or of associating themselves with local concerns. Mr. Griffiths suggests that they should follow the American practice of personally controlling and directing the same with their experience and their money, in order to share in the great prosperity that must inevitably take place from now onwards.

International Organisation and Equipment of Schools Exhibition, Russia.

Copies (in English) of the programme, rules, etc. of the International School Exhibition, St. Petersburg, have been received from Mr. C. H. Mackie, the British Acting Consul at St. Petersburg. The exhibition is to be opened on April 15, 1912, and is to remain open for three months. Foreign exhibits will be admitted into Russia free of duty, on condition of re-exportation within six months. Applications for space should be sent to the Executive Committee of the International Exhibition "Organisation and Equipment of Schools," Panteleimonskaya No. 2, St. Petersburg, not later than November 1. Copies of the programme, rules, etc. (in English) of the exhibition may be obtained by British manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Last Year's Lock-out in the German Building Trade.

Referring to this subject in his annual report, the British Consul at Frankfort-on-Main recalls the fact, mentioned in his report for 1908, that the employers in the building trade had forced upon the employed throughout Germany scheduled wage agreements, the terms of which were not popular, but were accepted after a series of unsuccessful strikes. The employers provided that all these agreements should come to an end in April, 1910, because in case of trouble, which was anticipated, a general cessation of the building work would infinitely strengthen the hands of the employers. As negotiations for a new national agreement, started already in the autumn of 1909, had failed, the workmen were given notice on April 1, 1910, for April 15, and on that day the great struggle began. The workmen's demands were chiefly for shorter hours, for a schedule of wages on a higher scale, and also for a more fairly constituted system of labour bureaux for the building trade, while the employers insisted upon one central bureau of control for the conclusion of labour agreements. Two circumstances were in favour of the workmen—the rise in the cost of living brought them the sympathy of the public, and the fact that for the first time after a succession of years there had been a revival in the building trade induced some employers, anxious to utilise a favourable opportunity, to waver. As a result, the numbers of workmen involved never reached the proportions at one time feared—400,000 in 25,000 concerns—and never exceeded 187,000, while the total number of men employed in the building trade probably exceeds 1,500,000. In some important centres (*e.g.*, Berlin and Hamburg) employers and employed soon arranged terms. In Berlin, where about 35,000 men are engaged in the building trade, the men were granted an immediate rise of 5 pf. per hour, to be increased, as from October, 1911, by a further 2 pf. In other centres the struggle was vehemently carried on. The employers received financial aid from several great employers' organisations, *e.g.*, the *Centralverband Deutscher Industrieller*, is said to have placed 5,000,000 marks at their disposal, and the Rhenish-Westphalian Coal Syndicate is believed to have contributed 500,000 marks. Government intervention proved futile. The lock-out lasted seven weeks in all, and ended on June 15 with a compromise. The employers granted shorter working hours, so that the working day in future will vary, according to locality, between 9½ and 10½ hours, with a further reduction as from 1912 to 10 hours: they also granted an immediate advance of 2 pf. to be increased later by a further advance of 4 pf. and 2 pf. respectively per hour. A certain discretion was left to local bodies for the settlement of further local differences.

PATENTS.

APPLICATIONS PUBLISHED.*

18,114 of 1910.—Conrad Dressler: Ovens for use in the manufacture of tiles, pottery, and analogous ware.

22,099 of 1910.—Francis Gascoigne Tynde and Everard Richard Calthrop: Method of and means for the construction of concrete sea-walls, piers, pontoons, floating-stages, foundations, and other structures.

22,218 of 1910.—Lucjan Fajans: Telescopic masts, lifting appliances, or the like.

27,526 of 1910.—Abraham Henry Wormald: Safety window-guard and fire-escape.

30,191 of 1910.—James Compton Merryweather: Apparatus for emptying cesspools, gulley-holes, and the like.

30,211 of 1910.—Richard Rouse, jun.: Boilers for heating water and generating steam.

4,932 of 1911.—William John Lindemeyer: Ventilators.

8,085 of 1911.—Herbert Sumner Owen: Manufacture of products of concrete, cement, and the like.

9,103 of 1911.—William Fry Scott: Reinforcement of concrete beams.

11,102 of 1911.—Herman Kopplinger: Manufacture of iron window bars.

11,444 of 1911.—William John Swain: Construction of reinforced floors and beams of concrete or any other fireproof or fire-resisting material.

14,053 of 1911.—Albert Mitrani: Metal bars for use in ferro-concrete construction.

TERMS OF SUBSCRIPTION.

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Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

October 2.—By Frank Lloyd & Sons.
Halghton, Flint.—Emral Estate, 232 acres, f. £8,805

October 5.—By Leedam & Harrison.
Newborough, Staffs.—Part of Holly Bush Estate, 1,013 acres, f. 32,325

October 7.—By Frank Lloyd & Sons.
Marlston-cum-Lache, Cheshire.—Lache Estate, 349 acres, f. 16,890
Saltney, Flint.—Mainwaring Farm, etc., 199 acres, f. 11,075

October 9.—By Winterton & Sons.
Walsall Wood, Staffs.—Nineteen cottages and 10 acres, f. 2,550
Hammerwich, Staffs.—Fourteen cottages, u.t. 64 yrs., g.r. 25*l.*, w.r. 119*l.* 12s. 534

By Frank Parsons & Co.
Paxford, Worcs.—Manor Farm, 282 a. 0 r. 3 p., f. 10,000

October 11.—By Dunn, Soman, & Coverdale.
Bradwell, Derby.—Hassop Estate, 546 acres, f. 22,610

October 12.—By Henry H. Collier & Madge.
Acton.—13, Mansell-rd., f., y.r. 29*l.* 400
19 and 21, Mansell-rd., u.t. 66 yrs., g.r. 12*l.*, y.r. 56*l.* 12s. 435

October 13.—By Wm. Dew & Son.
Llanfihangel-y-Pennant, Carnarvon.—Farm and copper mine, 654 a. 2 r. 10 p., f. £1,590

By Mabbett & Edge.
Tedburn St. Mary, Devon.—Five farms, etc., 961 acres, f. 11,235

October 16.—By Percival Hodson.
Southgate.—The Green, Bay Tree Cottage and Lawn Side, f., y.r. 120*l.* 1,875

By Edward Wood.
Thornton Heath.—37, Maplethorpe-rd., f., c.r. 25*l.* 250
Hampstead.—92, Loveridge-rd., u.t. 85 yrs., g.r. 9*l.* 9s., w.r. 72*l.* 290
Enfield.—1 to 6, Green-st., u.t. 87 yrs., g.r. 21*l.*, w.r. 107*l.* 18s. 460
Canning Town.—81, Stephenson-st., f., p. 175
Ilford.—5, Khartoum-rd., u.t. 89 yrs., g.r. 4*l.* 10s., p. 105
Seven Kings.—37, Ladysmith-av., u.t. 94 yrs., g.r. 5*l.*, p. 170

By White & Sons.
South Nutfield, Surrey.—Part of the King's Mill Estate, 552 a. 3 r. 19 p., f. 14,600

October 17.—By Orgill, Marks, & Barley.
Lewisham.—Station-rd., Mid-Kent Tavern, lease for 35 yrs. at 125*l.*, with possession 3,400

By Stanley Parkes & Brown.
Tottenham.—42 to 48 (even), St. Paul's-rd., f., w.r. 109*l.* 4s. 970

By Stuart & Tivendale.
Highgate.—Great North-rd., Laurel Bank, u.t. 86 yrs., g.r. 9*l.*, e.r. 80*l.* 900

By Thurgood & Martin.
Bloomsbury.—1, Gordan-pl., u.t. 12 yrs., g.r. 30*l.*, p. 190

October 17.—By Wheeler & Wheeler.
Muswell Hill.—Sunnyside, f.g. rents 85*l.*, reversion in 94 yrs. 2,910
Holloway.—18 and 21, Cressida-rd., u.t. 75 yrs., g.r. 12*l.*, y. and e.r. 72*l.* 575
31, Cressida-rd., u.t. 95 yrs., g.r. 6*l.*, y.r. 48*l.* 420
28 and 30, Parolles-rd., u.t. 75 yrs., g.r. 14*l.*, y.r. 76*l.* 620

By Hampton & Sons.
Bedhampton, Hants.—Belmont and Hooks Farms, 121 acres, f. 4,750
Five cottages and pasture, 24 acres, f. 2,925

October 18.—Foster & Cranfield.
Southend-on-Sea, Essex.—50, 52, and 52A, High-st., and 4, York-rd., f.g. rents 180*l.*, reversion in 80 yrs. 3,805
6, 8, and 10, York-rd., f.g.r. 47*l.* 10s., reversion in 80 yrs. 930

October 19.—By Field & Sons.
Tottenham.—14 to 24 (even), Durban-rd., u.t. 83 yrs., g.r. 12*l.*, w.r. 124*l.* 16s. 450
Dulwich.—40, 44, and 46, Heber-rd., u.t. 66 yrs., g.r. 15*l.* 15s., w.r. 120*l.* 18s. 600

By Stimson & Sons.
Lewisham.—80, 82, and 84, Loampit Vale, f., y.r. 96*l.* 1,155
Peckham.—Lower Park-rd., f.g.r. 7*l.* 7s., reversion in 45 yrs. 145
New Cross.—41 and 43, Nynehead-st., u.t. 84 yrs., g.r. 11*l.*, w.r. 83*l.* 4s. 300
Old Kent-rd.—Nos. 614 and 616, f., y. and e.r. 92*l.* 500

By Farebrother, Ellis, & Co.
Bookham, Surrey.—Church-st., Fife Lodge and 1 a. 0 r. 32 p., f. 1,060
High-st., ironmonger's shop, f., y.r. 49*l.* 1,000
Office and club premises, f., e.r. 45*l.* 590
Victoria Temperance Hotel, f., p. 1,600
Merrylands Farm, 1 a. 3 r. 31 p., f., p. 420
Merrycourt Cottages, f., w.r. 27*l.* 6s. 330
Merrycourt, f., p. 650
Merrylands-rd., eleven cottages and plot, f., w.r. 143*l.* 1,565
Halfway houses and plot of land, f., w.r. 44*l.* 380
Pleasaunce-row and Brook Cottages, f. and c., w.r. 64*l.* 7s. 560

October 20.—By Cooks & Burrell.
Ealing.—The Lodge, stabling, and 1 a. 1 r. 30 p., f., p. 2,000

By Protheroe & Morris.
South Lambeth.—1, 3, and 5, Miles-st., f., w.r. 18*l.* 12s. 1,800
Leytonstone.—Pretoria-rd., ten plots, f. 475

By Reynolds & Eason.
Paddington.—14, Westbourne-st., u.t. 26 yrs., g.r. 12*l.*, y.r. 115*l.* 1,050
King's Cross.—Battle Bridge Wharf, u.t. 23 yrs., g.r. 250*l.*, y.r. 420*l.* 1,210
Walworth.—76, Walworth-rd. (s.), u.t. 58 yrs., g.r. 20*l.*, y.r. 100*l.* 800
Victoria Park.—Chisenhale-rd., f.g. rents 40*l.* 0s. 3d., reversion in 59 yrs. 950

By Wiltshire & Co.
Hornsey.—Mayfield-rd., f.g. rents 16*l.*, reversion in 88 yrs. 355
Bowes Park.—Manor-rd., f.g. rents 13*l.* 10s., reversion in 88 yrs. 300
Hampstead.—Ingham-rd., f.g.r. 7*l.*, reversion in 88 yrs. 135
Fortune Green-rd., f.g.r. 11*l.*, reversion in 79 yrs. 250
Harringay.—Harringay-rd., f.g. rents 11*l.* 10s., reversion in 66 yrs. 240
Duckett-rd., f.g. rents 53*l.* 10s., reversion in 82 yrs. 1,275
Pinner.—Wellington-rd., f.g. rents 23*l.*, reversion in 89 yrs. 560
Wembley.—London-rd., f.g. rents 31*l.* 10s., reversion in 87 yrs. 730
Hanwell.—Greenford-av., f.g. rents 12*l.* 12s., reversion in 87 yrs. 285

Contractions used in these lists.—**F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.**

*** All these applications are in the stage in which opposition to the grant of Patents upon them can be made.**

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments —; Auction Sales, xxiv.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisement; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

OCTOBER 28. — **Salford.** — Extension of office accommodation on workhouse site at Eccles New-road. Premiums 20*l.* and 10*l.* Particulars from the Board of Guardians, Salford. Limited to architects practising in Salford and district only.

OCTOBER 30.—**Holland.**—STAINED GLASS WINDOW.—Designs are invited for a stained glass window to be erected in the University at Groningen. See advertisement in issue of June 9 for further particulars.

OCTOBER 31. — **Bristol.** — ALTERATIONS IN THE GRAND HOTEL. — Particulars from Mr. F. A. Jenkins, 44, Corn-street, Bristol.

OCTOBER 31. — **Marylebone.** — NEW MUNICIPAL BUILDINGS.—Premiums of 100*l.*, 75*l.*, 50*l.* The assessor is Mr. Henry T. Hare, F.R.I.B.A. See advertisement in issue of July 14 for further particulars.

NOVEMBER 1. — **City of St. Petersburg.**—MONUMENT TO ALEXANDER II.—Particulars in our issue of August 13, 1910.

* NOVEMBER 6. — **Stockport.** — NEW MENTAL WARDS.—The Stockport Guardians invite competitive designs for new buildings for mental patients at Infirmary, Stepping-hill, near Stockport. Three premiums are offered. See advertisement in this issue for further particulars.

NOVEMBER 17.—**Nottingham.**—BAPTIST CHURCH AND PREMISES.—Limited to Nottingham architects. Assessor, Mr. H. W. Wills, A.R.I.B.A. Particulars from Messrs. Rorke & Jackson, solicitors, King-street, Nottingham.

NOVEMBER 30.—**Cardiff.**—TECHNICAL INSTITUTE.—The Cardiff Education Committee invite designs and estimates for a technical institute. See advertisement in issue of August 18 for further particulars. Successful architect to carry out work. Premiums of 125*l.*, 75*l.*, and 50*l.* to other competitors. Mr. J. S. Gibson, assessor.

NOVEMBER 30. — **Hastings.** — EAST SUSSEX HOSPITAL.—The Joint Committee of the East Sussex Hospital and King Edward VII. Memorial Funds invite designs for new hospital. See advertisement in issue of August 25 for further particulars. Premiums of 125*l.*, 75*l.*, and 50*l.* Mr E. T. Hall, assessor.

DECEMBER 29. — **Glasgow.** — DESIGN FOR A BRIDGE.—Designs are invited (Alexander Thomson Travelling Studentship) for a bridge. Premiums of 60*l.* and 20*l.* are offered. See advertisement in issue of December 24 for further particulars.

DECEMBER 30.—**Welsh Eisteddfod, 1912.**—DESIGNS FOR WORKMEN'S DWELLINGS.—Prize, 50*l.* Particulars from Welsh Housing Association, 9, Temple-chambers, E.C.

JANUARY 1, 1912. — **Rochdale Infirmary.**—EXTENSIONS.—Limited to Rochdale architects. Assessor, Mr. Alex. Graham, F.R.I.B.A.

JANUARY 29, 1912.—**Montevideo.**—Government palace (premiums, 2,125*l.* and 850*l.*) and town improvement scheme (premiums, 1,060*l.*, 640*l.*, and 425*l.*). Conditions may be seen at the Board of Trade, 73, Basinghall-street, E.C.

JANUARY 31, 1912. — **Australia.** — DESIGNS FOR FEDERAL CAPITAL CITY.—The Government of the Commonwealth of Australia invite competitive designs for the laying out of this Federal capital city. See advertisement in issue of September 1 for further particulars.

JULY 1, 1912.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf.

NO DATE.—**Armadale.**—Public hall and offices, to cost 2,500*l.* Premiums of 15*l.* and 10*l.* Particulars from the Town Clerk, Armadale.

NO DATE.—**Bolton.**—Miners' Federation Hall and Offices. Limited to architects within twenty-five miles of Bolton. Premiums, 50*l.* and 25*l.* Assessor, Mr. Jonathan Simpson, F.R.I.B.A. Particulars from Messrs. Fielding & Fernihough, 7, Fold-street, Bolton.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

OCTOBER 28. — **Belturbet.** — NEW PREMISES.—Erection and completion of drapery establishment. Plans and specification from Mr. J. Brady, C.E., architect, Broomfield House, Ballyhaise.

OCTOBER 28.—**Braunton.**—HOUSES.—Erection of two houses at East-hill, Braunton. Plans and specifications at No. 8, Fort-terrace, Barnstaple. Mr. Gordon R. Folland, P.A.S.I., Barnstaple.

OCTOBER 28.—**Killarney.**—REBUILDING.—For rebuilding the International Hotel. Plans and specification by Mr. Geo. T. Moore, A.R.C.S.I., M.Inst.C.E.I., civil engineer and architect, 1 and 2, Foster-place, Dublin. Quantities by Mr. James Mackey, quantity surveyor, 58, Dame-street, Dublin. Deposit of 1*l.* 1s.

OCTOBER 28.—**Morecambe.**—RESIDENCE.—Erection of a villa residence in Hawarden-avenue, South-road. Plans, specifications, etc., seen at "Ye Planry," 23, Queen-street. Mr. Albert Gorton, Architect, 10, Morecambe-street, Morecambe, Lancs.

OCTOBER 28. — **Torrington.**—OFFICE.—Erection of an office for the superintendent of police at the police-station. Plans and specifications with the County Architect, Mr. E. H. Harbottle, Queen-street, Exeter.

OCTOBER 30. — **Coventry.**—HOUSES.—Erection of three blocks of houses, four to each block, at Alderman's Green, near Coventry, for the Coventry Perseverance Co-operative Society, Ltd. Plans and specifications from Mr. Walter H. Hattrell, architect, 23, Hertford-street, Coventry.

OCTOBER 30.—**Crumlin.**—SCHOOLS.—Erection of new National schools. Plans and specification with Mr. George O'Connor, C.E., F.R.I.A.I., architect, 42B, Great Brunswick-street, Dublin. Quantities from Mr. James Mackey, surveyor, 58, Dame-street, Dublin. Deposit of 1*l.*

OCTOBER 30.—**Partown.**—DWELLINGS.—Erection of four artisans' dwellings, Avenues Estate. Messrs. J. H. Hall & Son, architects and surveyors, Exchange, Huddersfield.

OCTOBER 30.—**Lydiard Millicent.**—DISINFECTOR HOUSE.—Erection of a disinfector house and disinfector apparatus at the Isolation Hospital. Specifications, plans, and particulars from the architect, Mr. R. J. Beswick, M.S.A., 10, Victoria-road, Swindon.

OCTOBER 30. — **Morley.** — ADDITIONS, ETC.—Alterations and additions to market buildings. Plans and specification seen, and quantities from Mr. T. A. Buttery, Lic.R.I.B.A., architect, Queen-street, Morley.

OCTOBER 30. — **Stalybridge.** — WAREHOUSE.—Erection of a new warehouse in Harrop-street and Chapel-street. Plans and quantities from Mr. Edward Garlick, architect, 3, Portland-place, Stalybridge.

OCTOBER 31.—**Aspatria.**—HOUSE.—Erection of a dwelling-house in Station-road. Plans and specifications with Mr. E. Wilson, jun., 4, Brough-street, Aspatria.

OCTOBER 31.—**Dublin.**—FACTORY.—Erection of a cycle factory at Pleasants-street. Drawings and specification with Mr. T. J. Cullen, M.R.I.A.I., architect, 25, Suffolk-street, Dublin. Quantities by Messrs. D. W. Morris & Co., surveyors, 68, Harcourt-street.

OCTOBER 31.—**Wokingham.**—HOMES.—Erection of cottage homes. Quantities and forms of tender from the Clerk to the Guardians, Mr. J. F. Sargeant, Shute End, Wokingham. Deposit of 1*l.* 1s.

NOVEMBER 1.—**Houghall.**—FOUNDATIONS, ETC.—Construction of brick and concrete foundations for a new ward block and mortuary, etc., and alterations to the existing hospital building at Houghall Hospital. Plans and specifications with Mr. G. Gregson, Surveyor, 38, Sadler-street, Durham.

NOVEMBER 1.—**Mitcham.**—ADDITIONS.—Alterations, additions, etc., to the male and female epileptic day-rooms at Workhouse, Western-road, Mitcham, Surrey. Architect, Mr. A. Saxon Snell, F.R.I.B.A., of 22, Southampton-buildings, Chancery-lane, W.C. Deposit of 5*l.*

NOVEMBER 1.—**Welwyn.**—COTTAGE.—For erecting and completely finishing cottage at the waterworks. Plans, specification, and conditions seen, and quantities from Mr. Henry F. Mence, 11, St. Peter's-street, St. Albans. Deposit of 1*l.* 1s.

NOVEMBER 2.—**Borth.**—HOUSE.—Erection of a house. Plan and specification from Mr. G. T. Bassett, A.R.I.B.A., architect and surveyor, 17, Terrace-road, Aberystwyth.

NOVEMBER 2.—**Diptcn.**—HOUSE, ETC.—Erection of presbytery and caretaker's house at Bradley Lodge. Drawings and specifications seen, and forms of tender from Mr. G. T. Wilson, Lic.R.I.B.A., architect, 22, Durham-road, Blackhill.

NOVEMBER 2.—**Nottingham.**—ALTERATIONS.—For structural alterations to stores in Woodborough-road. Particulars at the Gas Engineer's Office, George-street, Nottingham. Deposit of 1*l.* 1s.

NOVEMBER 3.—**Fartown.**—COTTAGES.—Erection of a block of four model cottages on the Avenues Estate. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Huddersfield.

NOVEMBER 3.—**Hirst.**—PREMISES.—Erection of new business premises. Plans and specification with Mr. Osborne Blythe, Lic.R.I.B.A., architect, Ashington, Northumberland.

NOVEMBER 3.—**Little Walsingham.**—SCHOOL.—Erection of new school. Names to the architect, Mr. H. J. Green, Castle Meadow, Norwich, and Paradise-chambers, King's Lynn. Quantities on deposit of 1*l.* 1s.

NOVEMBER 3. — **Rochester.** — POST-OFFICE. — Erection of Rochester new post-office. Drawings, specification, and conditions with the Postmaster, Rochester. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

NOVEMBER 4.—**Ord.**—REPAIRS.—For repairs at East Ord Council School. Specifications seen at the school. Head Teacher, Ord School, Berwick.

NOVEMBER 4.—**Porthcawl.**—HOUSES.—Erection of two houses in Suffolk-place. Plans and specifications with Mr. D. Griffiths, M.S.A., architect, Dock-street-chambers, Porthcawl.

NOVEMBER 6.—**Clydach.**—CLASSROOMS, ETC.—Erection of a new transept, with classrooms, and other work at the parish church, Clydach Vale. Plans and specification seen, and quantities from Mr. J. W. Rodger, architect, 14, High-street, Cardiff.

* NOVEMBER 7. — **Chiswick.** — SCHOOL.—The Chiswick U.D.C. invite tenders for boys' school, Strand-on-the-Green, Chiswick. See advertisement in this issue for further particulars.

NOVEMBER 7.—**Newton Abbot.**—ADDITIONS.—Additions to the nurses' home and laundry at the Workhouse. Plans and specifications with Mr. Samuel Segar, architect, Union-street, Newton Abbot.

NOVEMBER 8.—**Hemsworth.**—NEW WING.—Erection of an additional wing to the Infirmary at the Workhouse, near Wakefield. Names to the architect, Mr. T. H. Richardson, Hemsworth.

* NOVEMBER 9.—**London, E.**—ALTERATIONS.—The St. George-in-the-East Guardians invite tenders for alterations, entailing some building work, in the heating apparatus at casual wards, Raymond-street, E. See advertisement in this issue for further particulars.

* NOVEMBER 10.—**Bournemouth.**—SCHOOLS.—The Bournemouth Education Committee invite tenders for elementary schools, Cranleigh-road, Stourfield. See advertisement in this issue for further particulars.

NOVEMBER 10.—**Latchford.**—SCHOOL.—Erection of a new boys' department of the Bolton Council School. Plans by Messrs. Wright & Hamlyn. Quantities from Mr. J. Moore Murray, M.Sc., Secretary and Director, Education Office, Sankey-street, Warrington. Deposit of 1*l.* 1s.

* NOVEMBER 10.—**Stanwell.**—ISOLATION HOSPITAL.—The Staines Joint Hospital Committee invite tenders for Isolation Hospital for Infectious Diseases at Stanwell, Middlesex. See advertisement in this issue for further particulars.

NOVEMBER 11.—**Newbridge.**—IMPROVEMENTS.—For proposed improvements to playground and ventilation at the Council schools. Plan and specification with Mr. S. Hill, Architect to the Committee, Green-lane, Redruth.

* NOVEMBER 11. — **Norbury.** — SCHOOL. — The Croydon Education Committee invite tenders for erection of a new school at Norbury. See advertisement in this issue for further particulars.

NOVEMBER 13. **Maesteg.** SCHOOL.—Erection of the proposed new Derllwyn School. Plans and specification seen, and quantities at the Maesteg Police-station; and from Mr. T. Mansel Franklen, Clerk of the C.C., Glamorgan C.C. Offices, Westgate-street, Cardiff.

* NOVEMBER 14. — **Haverfordwest.** — POST-OFFICE EXTENSION.—The Commissioners of H.M. Works and Public Buildings invite tenders for extension of post-office. See advertisement in this issue for further particulars.

* NOVEMBER 14.—**Shipton Bellinger.**—SCHOOL, ETC.—The Southampton C.C. invite tenders for new Council school and teacher's house. See advertisement in this issue for further particulars.

* NOVEMBER 14. — **Walthamstow.**—SCHOOL.—The Walthamstow Education Committee invite tenders for alterations to the Pretoria-avenue Girls' School. See advertisement in this issue for further particulars.

NOVEMBER 15.—**Pembroke.**—SEA WALL.—Erection of a sea wall at Cwmyreglwys, Dinas. Plan and specification with Mr. W. R. Davies, Road Surveyor, Cambria-terrace, Newport, Pembroke.

NOVEMBER 16. — **Folkestone.**—SCHOOL.—Erection of the new Harvey Grammar School for Boys in Cheriton-road. Plans and specification, by Mr. Edwin Finn, of 19, Watling-street, Canterbury, and conditions of contract at the office of the quantity surveyor, Mr. H. J. Moody, 5, Cheriton-place, Folkestone. Quantities on deposit of 1*l.* 1s.

NOVEMBER 17.—**Prestwich.**—INFIRMARY.—Erection of a new infirmary for female patients at the Asylum. Drawings, specification, and conditions of contract seen, and quantities, by Mr.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

Arthur Briggs, F.S.I., Manchester, from the architect, Mr. Thomas Chadwick, A.R.I.B.A., of 16, Princess-street, Manchester. Deposit of 2*l.* 2s.

NOVEMBER 18.—**Portland.**—FLOOR, ETC.—For reslating roof, and laying cement concrete floor at the R.G.A. drill-hall, Easton-road. Specification from Mr. F. T. Maltby, A.M.Inst.C.E., architect and surveyor, Dorchester.

★ NOVEMBER 23.—**Bexhill.**—SCHOOL.—The Bexhill Education Committee invite tenders for infants' school. See advertisement in this issue for further particulars.

★ DECEMBER 2.—**Tewkesbury.**—ISOLATION HOSPITAL, ETC.—The Tewkesbury Joint Hospital Board invite tenders for an Isolation Hospital, with outbuildings, and for alterations and additions to existing Hospital at Fredington, near Tewkesbury. See advertisement in this issue for further particulars.

No DATE.—**Bradford.**—SPINDLE WORKS.—Erection of spindle works, Mount-street. Plans seen, and quantities from Mr. T. Riley, architect and surveyor, Lidget Green.

No DATE.—**Bristol.**—PULLING DOWN.—For pulling down and clearing the site of the proposed Hippodrome, St. Augustine's-parade, Bristol. Messrs. Frank Matcham & Co., architects, 9, Warwick-court, Holborn, London, W.C.

No DATE.—**Calverley.**—GREEN.—For forming and laying a bowling green in the park. Quantities and particulars from Mr. William Walker, Surveyor, Council Offices, Calverley.

No DATE.—**Drogheda.**—ADDITIONS.—For alterations and additions to "Beaulieu House." Drawings and specification with Mr. S. Wilson Reside, C.E., architect, Margaret-square, Newry. Quantities by Mr. F. S. Hall, F.S.I., quantity surveyor, 8, Westmoreland-street, Dublin. Deposit of 3*l.* 3s. to the architect.

No DATE.—**Eccleshall.**—COURT-HOUSE, ETC.—For the conversion of premises in High-street into a police-station, and erection of a court-house. Drawings and specifications with Mr. W. James Nevett, the County Architect, County-buildings, Stafford. Deposit of 2*l.* 2s. for quantities.

No DATE.—**Morley.**—MILL.—Erection of a three-story mill. Mr. G. B. Clegg, architect, care of David Bradley, Ltd., Morley.

No DATE.—**Southsea.**—THEATRE.—Erection of the Apollo Theatre, Albert-road, for the Apollo Kinematic Theatre, Southsea, Ltd. Office of the Company, 2, King's-terrace, Southsea.

No DATE.—**Tidworth.**—CHURCH.—Erection of proposed Roman Catholic church. Plans and specification seen at the office of the architect, Mr. G. L. W. Blount, 39, High-street, Salisbury. Deposit of 1*l.* 1s.

ENGINEERING, IRON, AND STEEL.

OCTOBER 30.—**Aldershot.**—GAS MAINS.—For laying gas mains, for the Aldershot Gas, Water, and District Lighting Company. Form of tender, etc., at the chief office of the Company, Victoria-road, Aldershot.

OCTOBER 30.—**Greenock.**—STRENGTHENING.—For the strengthening of about 100 ft. in length of the East India Wharf. Plans seen, and specification from Mr. Robert Crawford, M.Inst.C.E., Engineer to the Trustees, Greenock. Deposit of 1*l.*

OCTOBER 31.—**Driffield.**—BRIDGE.—For repairs to Cruckley Bridge. Specification with Mr. T. Casson Beaumont, Surveyor, Driffield.

NOVEMBER 2.—**Ipswich.**—BRIDGE.—For widening the Seven Arches Bridge. Plans and specification from Mr. E. Buckham, Borough Surveyor.

★ NOVEMBER 2.—**Wandsworth.**—VETILATION.—The Wandsworth Guardians invite tenders for extra ventilation to roofs of laundry at St. John's-hill Infirmary. See advertisement in this issue for further particulars.

NOVEMBER 3.—**Leiston.**—WELL.—Construction of a dug well. Plans and specifications with Mr. Chas. H. Warren, Waterworks, Woodbridge. Deposit of 1*l.* 1s.

NOVEMBER 6.—**Edinburgh.**—ELECTRICAL INSTALLATION.—For the electrical installation for lighting, heating, and power at the College of Art. Specification, plans, and forms of tender from Mr. Frank A. Newington, Engineer, Electricity Supply Station, Dewar-place, Edinburgh. Deposit of 1*l.* 1s.

NOVEMBER 7.—**Watford.**—WATERWORKS.—For sinking and lining four 36-in. boreholes, a 6-ft. well, and other work in connexion therewith. Plans, specification, and conditions of contract on application to the Engineer, Mr. D. Waterhouse, Council Offices, High-street, Watford. Quantities on deposit of 5*l.*

NOVEMBER 8.—**Boston, Lincs.**—EMBANKMENT, ETC.—For excavating earth and tipping same so as to form an embankment for sidings for the Boston Harbour and Dock Commissioners. Plans and drawings seen, and specification from the Engineer, Mr. G. E. Clarke, A.M.Inst.C.E., Municipal-buildings, Boston. Deposit of 5*l.*

NOVEMBER 17.—**Reading.**—OPEN-AIR BATH.—Construction of a concrete bathing-place, with campsheathing, footbridges, buildings, galvanised-iron screen fences, and other works at Coley, Reading. Drawings, specification, and general conditions seen, and form of tender from Mr. John Bowen, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Reading.

FURNITURE, PAINTING, MATERIALS, etc.

OCTOBER 28.—**Blackpool.**—TUBES.—For supply of 200 lin. yds. of wrought-steel tubes. Specification and drawing from Mr. J. S. Brodie, Borough Engineer and Surveyor, Town Hall, Blackpool.

OCTOBER 30.—**Aberdeen.**—PAINTING.—For painting the Parish Council Offices. Specifications from Mr. C. B. Williams, Inspector, 20, Union-terrace, Aberdeen.

OCTOBER 30.—**Huddersfield.**—PAINTING.—For painting the Ramsden-street Baths. Plans and specifications seen, and quantities from Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street, Huddersfield.

OCTOBER 31.—**Bristol.**—PAINTING, ETC.—For distempering, painting, etc., wards at the Eastville Workhouse. Mr. J. J. Simpson, Clerk, St. Peter's Hospital, Bristol.

OCTOBER 31.—**North Frodingham.**—FENCING.—Erection of wood guard fencing on the side of Mickley Dyke. Specification seen, and information from Mr. T. Casson Beaumont, Surveyor, Driffield.

NOVEMBER 2.—**Felixstowe.**—PAINTING.—For painting the outside of the Suffolk Convalescent Home, Felixstowe. Apply for information to the Matron.

NOVEMBER 3.—**Cumberland.**—PAINTING.—For painting works at the following police-stations:—Carlisle (Abbey-street), Harrington, Kinkry-hill, Longtown, Penrith, Silloth, Warkington (Gladstone-street). Specifications from Mr. G. Dale Oliver, F.R.I.B.A., County Architect, Carlisle.

NOVEMBER 13.—**Hereford.**—PAINTING.—For papering and painting nine cottages at the Gasworks. Specification from Mr. W. W. Townsend, Engineer and Manager, Hereford Corporation, Gas Department.

NOVEMBER 25.—**Dartford.**—PAVING.—For wood paving in Kent-road. Plan and specification seen, and form of tender from the Surveyor, Council Offices, Dartford.

ROADS, SANITARY AND WATER WORKS.

OCTOBER 30.—**Malling.**—ROADS.—For making-up, constructing, and forming Police Station-road, West Malling, and Alma-road, Eccles. Plans and specifications with Mr. Fredk. J. Allison, Clerk to the Council, West Malling, Kent.

OCTOBER 30.—**Penarth.**—STREETS.—For private improvement works in Cawnpore-street. Plans seen and specification and quantities from Mr. Edgar I. Evans, A.M.Inst.C.E., Surveyor, Council Office, Penarth.

OCTOBER 30.—**Sheringham.**—ROAD.—For making-up a portion of Nelson-road. Quantities and particulars from Mr. Frank Hall Smith, Surveyor's Office, Sheringham.

OCTOBER 31.—**Lazonby.**—ROAD.—For improvement to the main road at the north-east end of Lazonby Village. Plans and specifications seen, and particulars from Mr. William Finch, Assistant County Surveyor, The Courts, Carlisle.

NOVEMBER 1.—**Darton.**—WATER SUPPLY.—For laying 2-in. cast-iron water mains, with all necessary valves, hydrants, water meters, etc. Plans seen and particulars from Messrs. Crawshaw & Wilkinson, surveyors, 13, Regent-street, Barnsley.

NOVEMBER 1.—**Dundrum.**—SEWER.—Construction of an outfall sewer from the Dundrum and Rathfarnham joint drainage area. Plans and specifications by Mr. P. H. McCarthy, B.E., M.Inst.C.E.I., 39, Westmoreland-street, Dublin. Deposit of 3*l.* 3s.

NOVEMBER 1.—**Llandaff.**—SEWERAGE.—For laying earthenware pipe sewers, etc. Plans and specifications seen, and quantities from the Surveyor, Mr. J. Holden, A.M.Inst.C.E., Park House, 20, Park-place, Cardiff.

NOVEMBER 1.—**Notton.**—WATER SUPPLY.—For laying a 2-in. and 3-in. cast-iron main, with necessary valves, hydrants, and water meters. Plans seen, and particulars from Messrs. Crawshaw & Wilkinson, surveyors, 13, Regent-street, Barnsley.

NOVEMBER 3.—**Manchester.**—STREETS.—For various street works. Plans and specifications seen, and quantities from the Surveyor to the Committee, Town Hall, West Didsbury.

NOVEMBER 4.—**Glasgow.**—MAINS.—For laying two additional mains from Craigmaddie service reservoir to the city. Drawings seen, and specification, quantities, and form of tender from Mr. J. R. Sutherland, Engineer Water Department, 45, John-street, Glasgow.

NOVEMBER 4.—**Romford.**—SEWER.—Construction of a 6-in. pipe sewer and surface-water drainage. Form of tender and quantities from Mr. W. J. Grant, Surveyor to the Council, Victoria-chambers, Romford. Deposit of 2*l.* 2s.

NOVEMBER 4.—**Seaford.**—GRANITE FLAKE.—For supply of Guernsey granite flake. Mr. W. H. Pawson, 3, Clinton-place, Seaford.

NOVEMBER 6.—**London.**—DRAINAGE.—For sewerage and surface-water drainage, etc., for the Hendon U.D.C. Drawings and specification seen, and forms of tender from Mr. S. S. Grimley, M.Inst.C.E., Engineer, Council Offices. Deposit of 10*l.*

NOVEMBER 8.—**Carstairs.**—ROAD.—Construction of a road about 1,665 lin. yds. in length. Drawings with Messrs. Warren & Stuart, civil engineers, 94, Hope-street, Glasgow. Quantities on deposit of 1*l.* 1s.

NOVEMBER 11.—**Shaw.**—SETTS.—For supply of granite setts. Mr. F. F. Gartside, Clerk and Surveyor, Town Hall, Shaw, near Oldham.

NOVEMBER 13.—**Horsham.**—MATERIALS, ETC.—Supply of materials, granite, etc. Forms of tender from Mr. H. W. Bowen, A.M.Inst.C.E., County Surveyor, Worthing-road, Horsham.

NOVEMBER 14.—**Blackrock.**—ROADS.—For widening the public roads at Williamstown, opposite Rosefield, and at Temple-hill. Plans and specifications seen, and particulars from Mr. R. Finlay Heron, Town Clerk, Town Clerk's Office, Blackrock.

NOVEMBER 14.—**London.**—PAVING, ETC.—For kerbing the roadways, and paving with artificial stone Datchet-road, Perry-hill, Catford. Plans at the Town Hall, Catford, Surveyor's Department. Deposit of 5s.

NOVEMBER 14.—**Southall.**—PAVING, ETC.—For paving, etc., at Featherstone-road and Western-road. Plans and specifications seen, and quantities from Mr. R. Brown, A.M.Inst.C.E., F.S.I., Engineer and Surveyor, Public Offices, Southall.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*STOCK, PLANT, ENGINES, ETC., MOORFIELDS, E.C.—On the Premises	Fryett, White, & Co.	Nov. 2
*FREEHOLD PROPERTY, CITY OF LONDON—At the Mart	Debenham, Tewson, Richardson, & Co.	Nov. 21
*FREEHOLD BUILDING SITE, CITY OF LONDON—At the Mart	Debenham, Tewson, Richardson, & Co.	Nov. 21

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£ s. d.
Best Stocks	1 13 0
Picked Stocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 10 0	Best Stourbridge Fire Bricks	4 0 0
Best Fareham Red	3 12 0	GLAZED BRICKS.	
Best Red Pressed Ruabon Facing	5 0 0	Best White and Ivory Glazed Stretchers	10 17 6
Best Blue Pressed Staffordshire	3 15 0	Headers	10 7 6
Do. Bullnose	4 0 0	Quoins, Bullnose, and Flats	14 7 6

BRICKS, &c. (*Continued*).

	£ s. d.		£ s. d.
D'ble Stretchers	16 7 6	Quoins, Bullnose, and Flats	14 7 6
Double Headers	13 7 6	D'ble Stretchers	16 7 6
One Side and two Ends	17 7 6	Double Headers	13 7 6
Two Sides and one End	18 7 6	One Side and two Ends	17 7 6
Splays & Squints	15 17 6	Two Sides and one End	18 7 6
Best Dipped Salt Glzd. Str'tch'rs	10 17 6	Splays & Squints	15 17 6
Headers	10 7 6		

Second Quality White and Dipped Salt Glazed, £1 5s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	30 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 8
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

STONE (*Continued*).

YORK STONE—*Robin Hood Quality.*

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
Scappled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	3
6 in. rubbed two sides ditto, ditto	2	6
3 in. sawn two sides slabs (random sizes)	0	11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7
1½ in. to 2 in. ditto, ditto	0	6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.		
Scappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto	3	0
3 in. sawn two sides slabs (random sizes)	1	2
2 in. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10best Eur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto	13	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000)	50	0
Hip and Valley (per doz.)	3	7	Do. pressed (per 1000)	47	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	50	0
Do. Ornamental (per 1000)	52	6	Hip (per doz.)	4	0
Hip and Valley (per doz.)	4	0	Valley (per doz.)	3	6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57	6	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD.	At per standard. £	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	...	15	10	0
Deals: best 3 by 9	13	10	0	...	14	10	0
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11	10	0	...	12	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0		less than 7 in. and 8 in.		
Deals: seconds	1	0	0	less thn best.			
Battens: seconds	0	10	0	"		"	
2 in. by in. and 2 in. by 6 in.	9	10	0	...	10	10	0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	...	10	0	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.			
¼ in.	1	0	0	"			
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5	0	0	...	5	10	0
Seconds	4	10	0	...	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	...	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	...	3	10	0
Swedish balks	2	12	6	...	3	0	0
Pitch-pine timber (30 ft. average)	4	10	0	...	5	5	0
JOINERS' WOOD.	At per standard.						
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0	...	25	10	0
3 in. by 9 in.	22	10	0	...	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0	0
Second yellow deals, 3in. by 11in.	19	0	0	...	20	0	0
" " 3 in. by 9 in.	18	0	0	...	19	10	0
Battens, 2½ in. and 3in. by 7 in.	14	0	0	...	15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22	10	0
Do. 3 in. by 9 in.	18	10	0	...	19	10	0
Battens	14	0	0	...	15	0	0
Second yellow deals, 3 in. by 11 in	16	10	0	...	17	10	0
Do. 3 in. by 9 in.	15	0	0	...	16	0	0
Battens	11	10	0	...	12	10	0
Third yellow deals, 3in. by 11 in.	13	10	0	...	14	10	0
Do. 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15	0	0	...	16	0	0
" " 3 in. by 9 in.	14	0	0	...	14	10	0
Battens	11	10	0	...	12	10	0
Second white deals, 3in. by 11in.	14	0	0	...	15	0	0
" " 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
Pitch-pine: deals	19	0	0	...	21	0	0
Under 2 in. thick extra	0	10	0	...	1	0	0
Yellow Pine—First, regular sizes	44	0	0	upwards.			
Oddments	32	0	0	"			
Seconds, regular sizes	33	0	0	"			
Oddments	28	0	0	"			
Kurai Pine—Planks per ft. cube.	0	3	6	...	0	5	0
Danzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	...	0	3	9
Small " "	0	2	6	...	0	2	6
Wainscot Oak Logs, per ft. cube	0	5	6	...	0	6	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	8½	...	0	0	9½
¼ in. do. do.	0	0	7	...		—	
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch.	0	0	10	...	0	1	1
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2	6

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard. £	s.	d.		£	s.	d.
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1	0
Teak, per load	18	0	0	...	22	0	0
American Whitewood planks, per ft. cube	0	4	0	..	0	5	0
Prepared Flooring, etc.—	Per square.						
1 in. by 7 in. yellow, planed and shot	0	13	6	...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. " "	0	14	0	...	0	18	6
¾ in. by 7 in. white " "	0	10	0	...	0	11	0
1 in. by 7 in. " "	0	12	9	...	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, £	s.	d.		per ton. £	s.	d.
Rolled Steel Joists, ordinary sections	7	10	0	...	8	0	0
Compound Girders, ordinary sections	9	10	0	...	10	0	0
Steel Compound Stanchions	11	0	0	...	12	0	0
Angles, Tees, and Channels, ordinary sections	9	10	0	...	10	0	0
Flitch Plates	9	10	0	...	9	10	0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0	...	8	10	0

METALS.

IRON—	Per ton, in London. £	s.	d.		£	s.	d.
Common Bars	8	10	0	...	9	0	0
Staffordshire Crown Bars, good merchant quality	8	15	0	...	9	5	0
Staffordshire "Marked Bars"	10	10	0	...		—	
Mild Steel Bars	8	15	0	...	9	5	0
Hoop Iron, basis price	9	5	0	...	9	10	0
" " Galvanised	17	0	0	...		—	
(*And upwards, according to size and gauge.)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	9	15	0	...		—	
" " 24 g.	10	15	0	...		—	
" " 26 g.	12	5	0	...		—	
Sheet Iron, Galvanised, flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	0	0	...		—	
Ordinary sizes to 22 g. and 24 g.	15	10	0	...		—	
" " 26 g.	16	10	0	...		—	
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	18	0	0	...		—	
" " 22 g. and 24 g.	18	10	0	...		—	
" " 26 g.	20	0	0	...		—	
Galvanised Corrugated Sheets—							
Ordinary sizes, 6ft. to 8ft. 20 g.	14	10	0	...		—	
" " 22 g. and 24 g.	14	15	0	...		—	
" " 26 g.	16	5	0	...		—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	0	0	...		—	
Best Soft Steel Sheets, 2 g. & 24 g.	13	0	0	...		—	
" " " 26 g.	15	0	0	...		—	
Cut Nails, 3 in. to 6 in.	10	10	0	...	11	0	0
(Under 3 in., usual trade extras.)							

LEAD, &c.

	£	s.	d.	
LEAD—Sheet, English, 4lb. and up	19	5	0	... —
Pipe in coils	19	15	0	... —
Soil pipe	22	15	0	... —
Compo pipe	22	15	0	... —
ZINC—Sheet—	In casks of 10 cwt.			
Vielle Montagne	34	10	0	... —
Silesian	33	15	0	... —
Zinc, in bundles, 1s. per cwt. extra.				
COPPER—				
Strong Sheet per lb.	0	1	0	... —
Thin " "	0	1	1	... —
Copper nails "	0	0	10	... —
Copper wire "	0	0	10	... —
BRASS—				
Strong Sheet "	0	0	11	... —
Thin "	0	1	0	... —
TIN—English Ingots "	0	1	10	... —
SOLDER—Plumbers' "	0	0	8½	... —
Tinmen's "	0	0	11	... —
Blowpipe "	0	1	2	... —

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
3/16 "	2½d.		
¼ "	2½d.	Ditto, tinted	5d.

Not less than three crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	6
" " " in barrels	"	0	3	7
" " " in drums	"	0	3	9
Boiled " " in barrels	"	0	3	9
" " " in drums	"	0	4	0
Turpentine in barrels	"	0	3	1
" in drums	"	0	3	3
Genuine Ground English White Lead, per ton		24	10	0
Red Lead, Dry	"	22	10	0
Best Linseed Oil Putty	per cwt.	0	11	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	6
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	9
French and Brush Polish	0	10	6

TO CORRESPONDENTS.

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All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ASHTON-UNDER-LYNE.—For Primitive Methodist church and schools, Ormonde-street, Hurst. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C.:—

	Estimate "A." £	s.	d.	Estimate "B." £	s.	d.	Estimate "C." £	s.	d.	Total. £	s.	d.
Normanton & Son	1,786	0	0	759	0	0	473	0	0	3,018	0	0
Saxon Bros.	1,636	0	0	694	0	0	364	0	0	2,694	0	0
Swallow & Taylor	1,570	0	0	670	0	0	370	0	0	2,610	0	0
J. Gibson & Sons	1,550	0	0	655	0	0	360	0	0	2,565	0	0
Gerrard & Sons	1,540	0	0	610	0	0	385	0	0	2,535	0	0
Pike & Sons	1,500	0	0	597	0	0	344	0	0	2,441	0	0
F. Woolley	1,400	0	0	600	0	0	330	0	0	2,330	0	0
Marshall & Sons	1,400	0	0	590	0	0	310	0	0	2,300	0	0
J. Ridyard	1,409	0	0	537	0	0	302	0	0	2,248	0	0
T. Dean	1,360	0	0	573	0	0	293	0	0	2,226	0	0
Marden & Sons	1,348	1	8	552	0	11	285	1	2	2,185	3	9
J. Robinson‡	1,322	0	0	537	0	0	289	0	0	2,148	0	0

‡ Accepted for first portion of scheme.

BLACKBURN.—For erection of four water-closets and urinal at the workhouse. Mr. S. J. Lancaster, architect, 4, King-street, Blackburn:—

J. Highton & Son	£103 2 6	W. Edmundson	£79 0 0
B. Hatton	94 0 0	H. Hindle, Blackburn*	73 0 0
J. Fecitt & Sons	85 0 0		
Lewis & Sons	85 0 0		

CHESTER.—For the erection of a new residence, Curzon Park, Chester. Messrs. Dickens-Lewis & Haymes, architects, Shrewsbury:—

W. Welsh	£1,992 10	McLallan & Bros.	£1,840 0
W. Vernon & Son	1,990 0	W. H. Thomas	1,799 0
Parker & Bros.	1,893 0	W. Higley	1,797 17
Morton Browne	1,885 0	Treasure & Son, Ltd., Shrewsbury*	1,697 0
J. Mayers, Son, & Co.	1,883 0		
W. Brown	1,849 0		

FARNHAM.—For alterations and additions to maternity ward. Messrs. Friend & Lloyd, architects, Aldershot:—

Mardon & Mills	£1,338 0	W. J. Snuggs, Frederick-street, Aldershot*	£1,124 0
Martin Wells & Co., Ltd.	1,275 0	H. N. Adams	1,081 15
Crosby & Co.	1,230 0		

GAERWEN.—For additions and alterations to the Council school. Mr. J. Owen, County Architect, Menai Bridge:—

Evans & Pritchard	£1,104	I. Evans, Menai Bridge*	£830
R. & T. Williams	995		

[Architect's estimate, £926.]

HENGOED.—For the erection of a dwelling-house at James's-terrace, for Mr. David Williams, Brynhyfryd, Hengoed. Messrs. Seaborne & Cayley, architects, Hengoed:—

T. Jones	£300 0	E. James	£263 15
R. Forsyth	298 10	J. Gittins & Sons, Hengoed*	240 0
D. Jones	280 0		

[Architects' estimate, £235.]

HINCKLEY.—For laundry machinery at new laundry at workhouse, for the Board of Guardians:—

Hill & Herbert, Ltd., Leicester* £345

LLANFAIRCAERINION (near Welshpool).—For the erection of a new village hall and institute. Messrs. Dickens-Lewis & Haymes, architects, Shrewsbury:—

T. Pace	£4,745 0 0	W. Bowdler & Co.	£4,000 0 0
H. Price	4,195 0 0	Treasure & Son, Ltd.	3,989 0 0
Jones & Evans	4,162 0 0	G.H. Bickerton	3,971 10 0
J. Higgins	4,120 0 0	W. Higley, Pontesbury*	3,464 15 0
W. H. Thomas & Sons	4,025 4 1		

LONDON.—For erection of ninety-eight cottages on the Tower-gardens section of the White Hart-lane estate, Tottenham, for the London County Council:

P. F. Whyborn	£22,469	A. Monk	£18,636
A.Roberts&Co.,Ltd.	21,180	Rowley Bros.	18,197
C. Wall, Ltd.	19,721	Nicholls & Son, Finchley*	17,780
W. Lawrence & Son	19,053		

[The Architect's estimate, comparable with the tenders, is £19,000.]

LONDON.—For heating and electric lighting work at the Great College-street School, St. Pancras, for the London County Council:—

Heating Work.

Boulton & Paul, Ltd.	£1,395 0 0
J. Grundy, Ltd.	1,037 0 0
Tilley Bros.	897 10 0
Cannon & Hefford	859 0 0
J. Yetton & Co., Ltd.	844 0 0
Brightside Foundry and Engineering Co., Ltd.	835 0 0
T. S. Knight & Sons	832 0 0
J. & F. May	830 0 0
G. & E. Bradley	805 0 0
W. G. Cannon & Sons, Ltd.	800 0 0
Palowkar & Sons, 90 and 91, Queen-street*	737 0 0

[The Architect's estimate, comparable with the tenders, is £850.]

Electric Lighting.

Fleet Electrical Co.	£566 17 0
E. Lawrance & Sons, Ltd.	525 0 0
Waring & Withers	496 13 9
Williams & Buch	484 0 0
Tredegar & Co	465 0 0
Johnson & Phillips	455 0 0
T. H. Smerdon	412 0 0
G. Weston & Sons, Ltd.	395 0 0
Saville & Walton, 8, Bream's-buildings, Chancery-lane*	340 0 0

[The Chief Engineer's estimate, comparable with the tenders, is £420.]

LONDON.—For enlargement of the York-road School, Islington, for the London County Council:—

A. J. Staines & Co., Ltd.	£1,421 12 1
Marchant, Hirst, & Co.	1,396 0 0
G. S. S. Williams & Son	1,366 0 0
J. Willmott & Sons	1,342 0 0
G. Neal	1,251 0 0
Stevens & Sons	1,234 19 0
E. Lawrance & Sons, Ltd.	1,237 0 0
Lenn, Thornton, & Co.	1,230 2 2
C. P. Roberts & Co.	1,225 0 0
McLaughlin & Harvey, Ltd., 13, Brecknock-road*	1,185 13 6

[The Architect's estimate, comparable with the tenders, is £1,176.]

LONDON.—For various alterations at the George Green's School, Poplar, for the London County Council:—

R. A. Lowe & Co.	£978	H. Newell	£755
J. Stewart	894	E. Lawrance & Sons, Ltd.	745
J. Grover & Sons	825	Vigor & Co., King-street, Poplar*	689
E. A. Roome & Co.	790		

LONDON.—For various alterations to the Whitefriars fire-station, for the London County Council:—

W. Gladding & Co.	£2,137	W. Downs	£1,640
H. L. Holloway	1,812	Kerridge & Shaw, Dane's Inn House, 265, Strand, W.C.*	1,555
W.Johnson&Co.Ltd.	1,798		
J. & C. Bowyer, Ltd.	1,773		

[The Architect's estimate, comparable with the tenders, is £1,700.]

LONDON.—For Baptist schools, York-road, Battersea. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, W.C.:—

W. Hammond, Yelverton Works, 72, York-road, Battersea, S.W.* £3,958 5

[Fourteen tenders were received.]

LONDON.—For finishing the portion of Norman-avenue, adjoining the White Hart-lane estate, Tottenham, for the London County Council:—

E. J. Knifton	£221 4 6	W. Griffiths & Co., Ltd., Bishopsgate, E.C.*	£147 2 7
E. T. Bloomfield	163 15 4		
F. J. Coxhead	149 0 0		

LONDONDERRY.—For erection of a professor's house and gate lodge, and alterations to the college, for the Trustees of MacCrea Magee College, Londonderry. Messrs. Robinson & Davidson, architects, Londonderry:—

J. A. Fulton	£4,621 10	Ballintine, Ltd.	£4,103 10
M. Sweeny	4,467 0	R. Colhoun, Londonderry*	3,960 0
H. Laverty & Sons, Ltd.	4,393 0		

MILFORD.—For repairing the Rathmullen Waterworks. Mr. J. S. Barnhill, engineer, Foyle-street, Londonderry:—

W. Cooke	£460	P. McDaid	£298
J. Doherty	349	J. Johnston, Letterkenny*	225

PRESTATYN.—For the erection of a manse. Messrs. Dickens-Lewis & Haymes, architects, Shrewsbury:—

W. D. Prescott	£580	A. Jones	£565
T. Jones, Prestatyn*	575		

ST. HELENS.—For extension of the Thatto Heath Council school, for St. Helens Corporation. Messrs. Biram & Fletcher, architects, St. Helens. Quantities by Mr. Reg. Wainwright, George-street, St. Helens:—

C. J. Middlehurst, Middlehurst-avenue, St. Helens* £4,846 8 6

SHEFFORD (Beds).—For erecting a house, for Mr. H. Inskip. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C.:—

C. Wright, Langford, Biggleswade, Beds* £664 11 10

WOODHOUSE (Leicestershire).—For laundry installation at Convalescent Home:—

Hill & Herbert, Ltd., Leicester* £194 2

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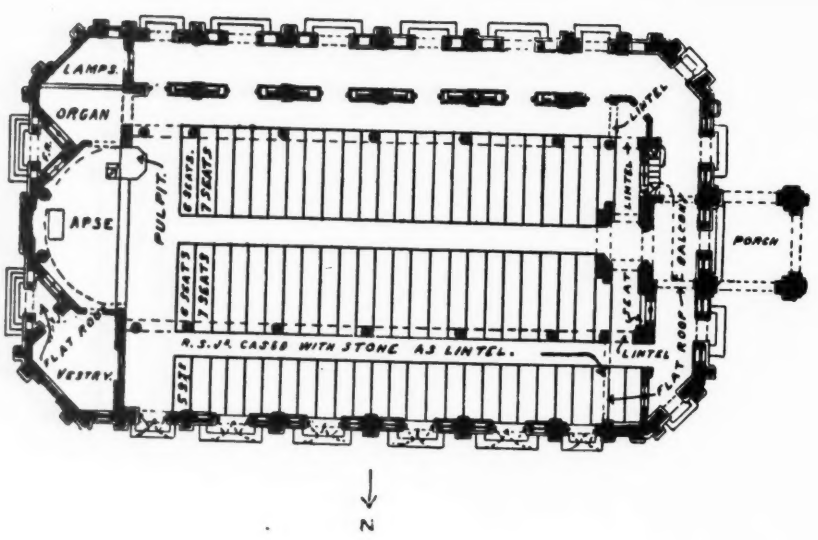

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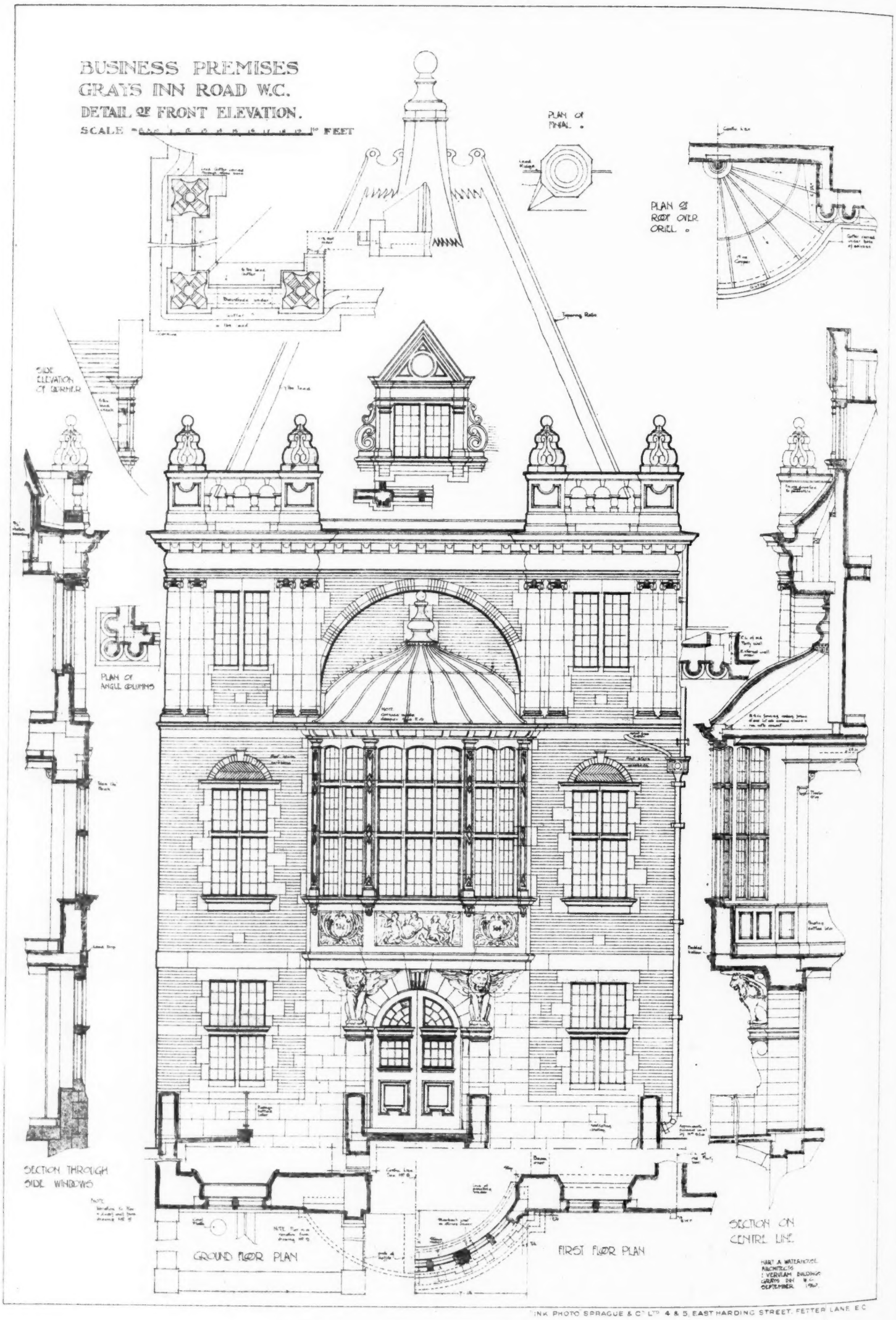

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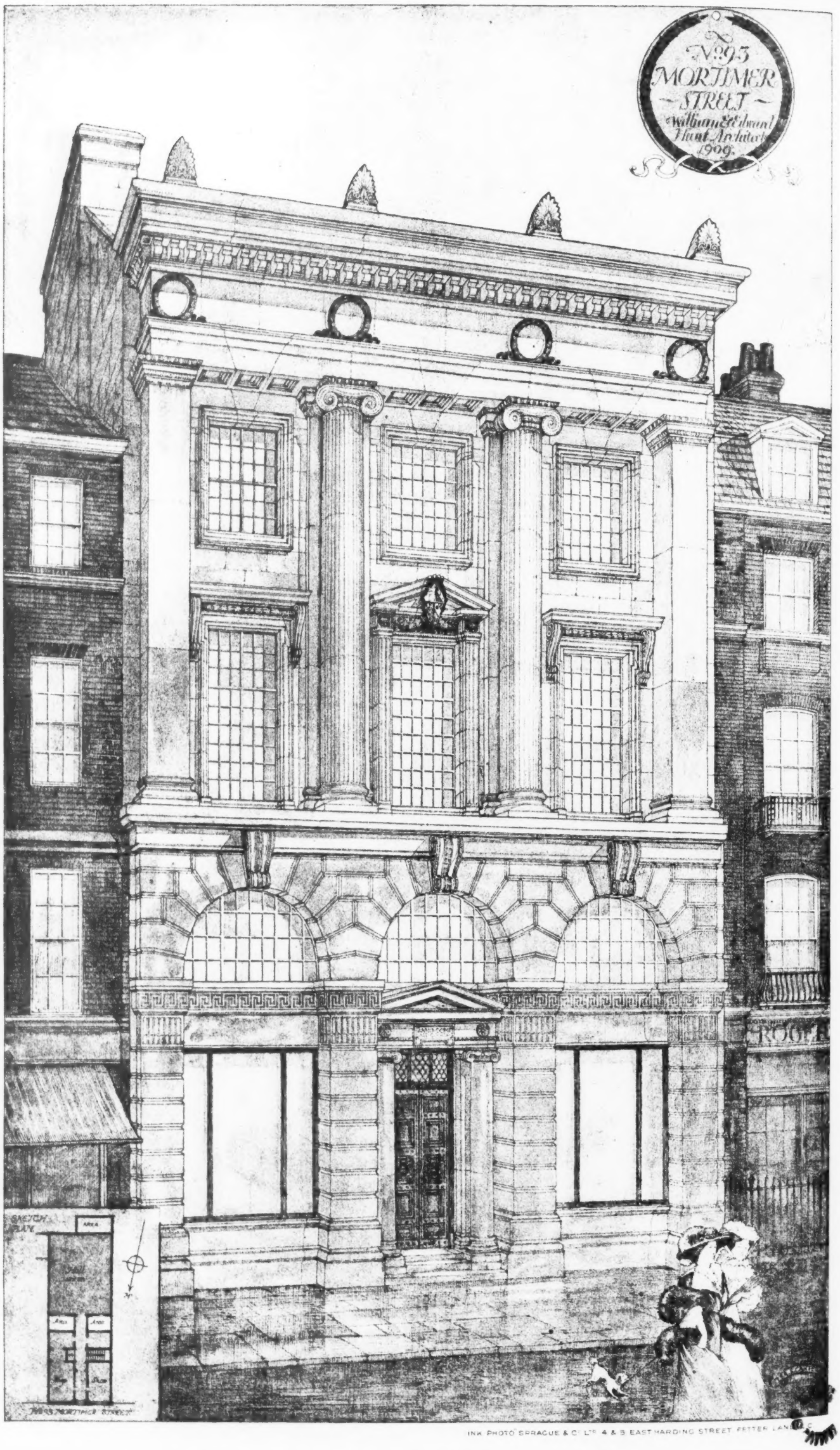

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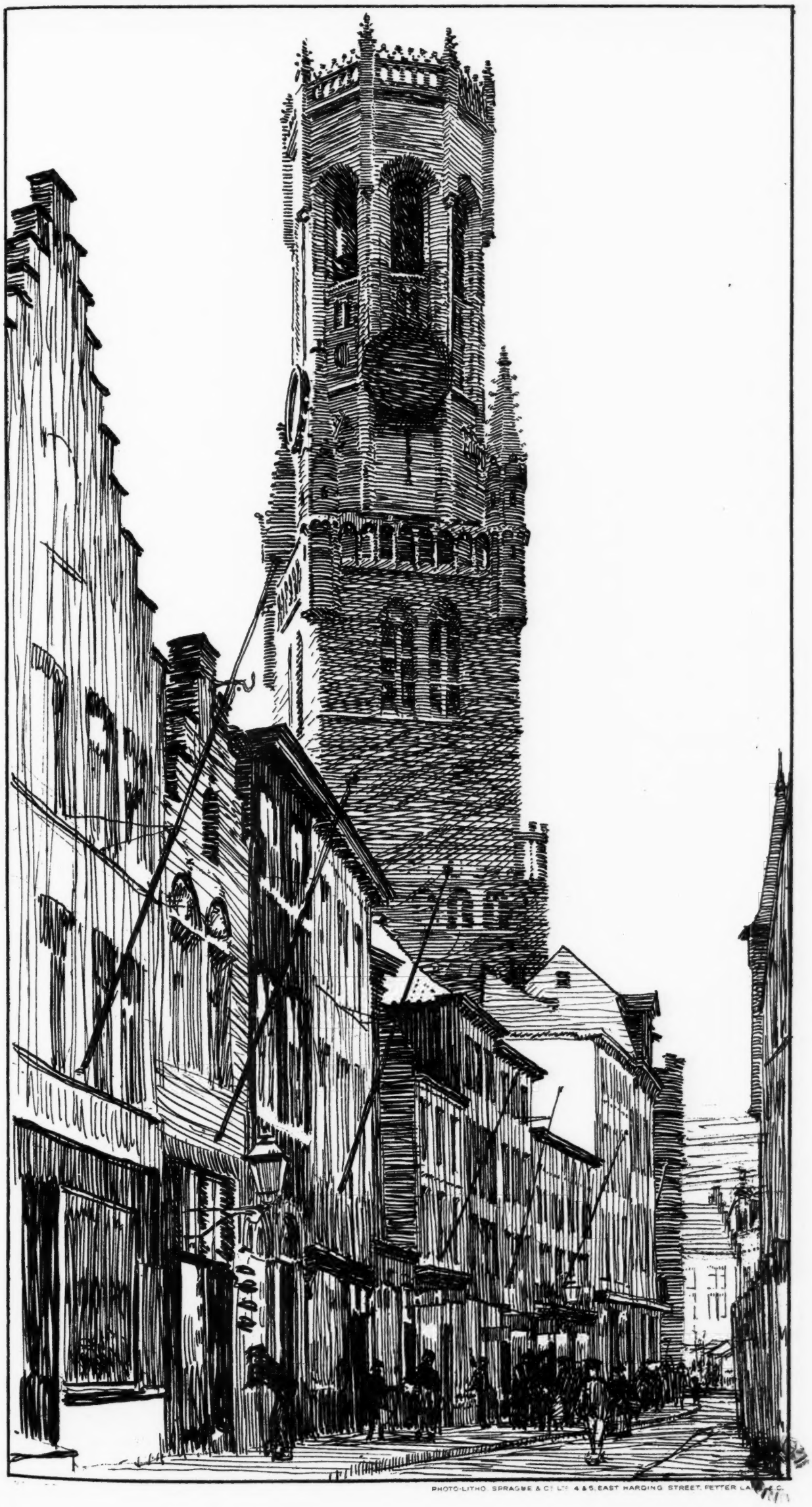

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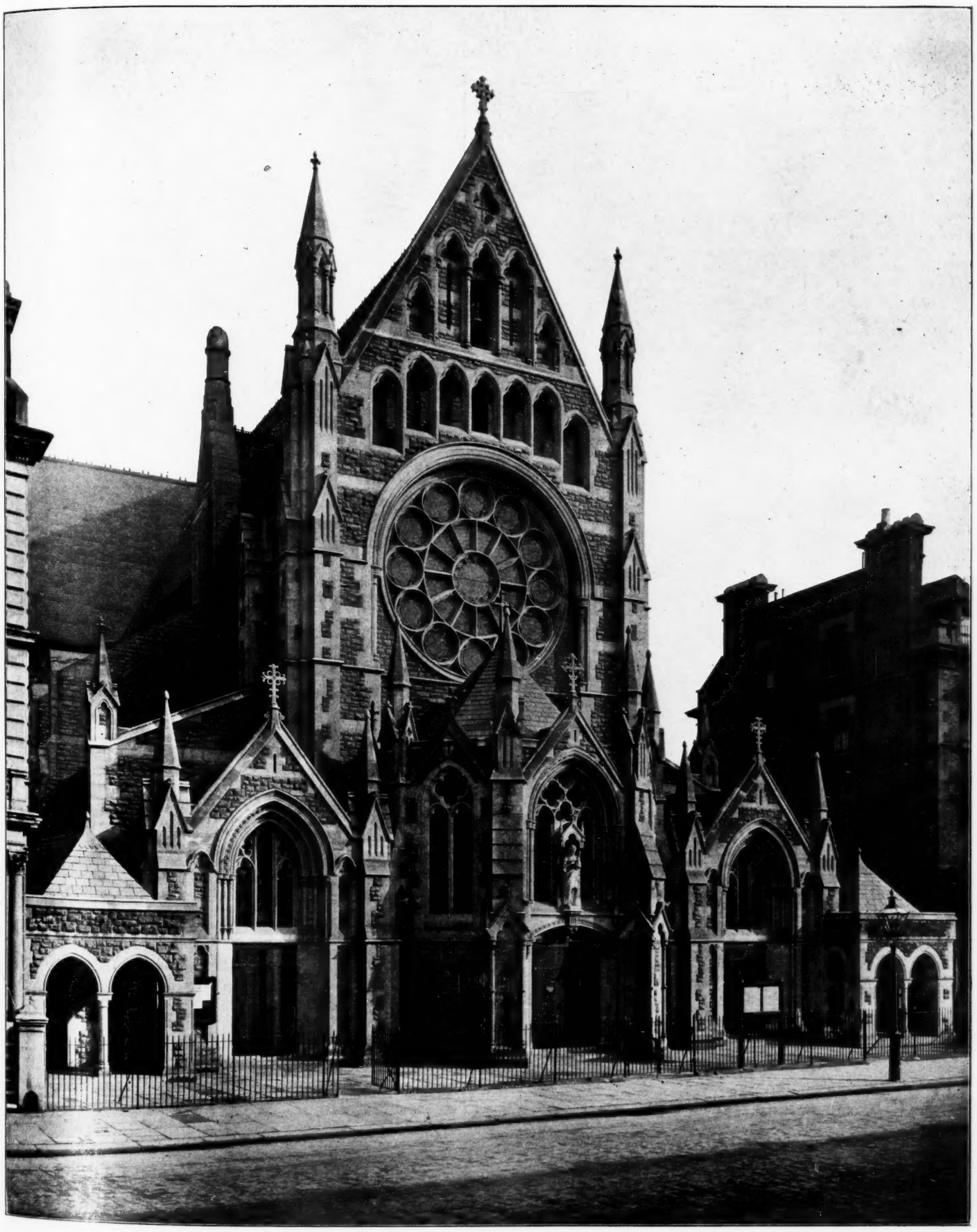

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